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Photo by Richard McCormack

PLATE 1

MASHERBRUM'S SOUTHEAST FACE from Serac Peak.

Masherbrum—1960

WILLIAM UNSOELD

THANKS to three previous attempts made upon it, Masherbrum was an extremely well-scouted objective when our party approached it in May of 1960. As early as 1938 a British party led by James Waller had reached a point high on the southeast face before being turned back by bad weather and frostbite. (See *Himalayan Journal*, 1939, pp. 42-56.) In 1955 a New Zealand group had exhausted itself in the pre-season snows before giving up at the foot of the southeast face, while as recently as 1957 a party from Manchester, England, reached a point only about 300 feet short of the summit. Members from each of these parties helpfully contributed all the information they could concerning the route, location of camps, best season of the year, etc., and so before our party even arrived in Pakistan, our schedule of moves was already made out with unaccustomed precision. Indeed, all hands shared the opinion that we really had this peak rigged and that barring a catastrophic accident or a complete breakdown in weather, we should have very little difficulty in pushing a successful rope to the summit.

Of course, long before this level of optimism could be reached, there had to have been the usual uncertainties endured concerning party, permission, and finances. These had been the particular province of our Director and energizing spirit, Nick Clinch. With permission from the Pakistan government safely in hand, he tackled the tougher problem of getting together a party. With infinite insight and delicacy, Nick finally managed to work himself around that perennial Himalayan problem—the Reluctant Wife. His use of enthusiastic propaganda, statistical safety demonstrations, and a downright deafness to repeated refusals finally won over an astonishing percentage of those married climbers whom he solicited as members. The result was an extremely strong and experienced team. Our climbing leader was George Bell, back for a third try at the Himalaya after participating in the 1953 K2 try and the 1955 Lhotse expedition. Nick and Tom McCormack had been together on the successful Hidden Peak trip in 1958, while Dick McGowan had been with George on Lhotse as well as running the Mt. Rainier Guides' Concession for several years.

A summer guide in the Tetons, I was also on my third Himalayan venture. The only two American members of the party without Himalayan experience were Dick Emerson and Tom Hornbein, our doctor. Dick had been an Army climbing instructor in the Tenth Division, the chief climbing ranger in the Tetons for many years, while Tom had climbed extensively in Colorado, the Tetons, and had gone high in Alaska.

Since the expedition was sponsored jointly by the American Alpine Club and the Sports Control Committee of the Pakistan Army, we were glad to welcome three Pakistani Army officers as full-fledged party members. Only Captain Jawed Akhter had had previous mountain experience with the British Armed Forces Expedition of 1959, but Captain Imtiaz Azim and Akram Quereshi proved themselves invaluable as public relations agents during the march in, as well as eager pupils during the actual climb.

With permission and party set, there remained the shipping deadline for food and equipment to meet. Our equipment was selected by Nick on the basis of his Hidden Peak experience and was of the highest quality. Eddie Bauer down jackets, pants, mittens, and bags; reindeer-skin high-altitude boots from Switzerland; high-altitude tents from Gerry Cunningham; and oxygen apparatus from the Swiss Foundation for Alpine Research give some idea of the quality which was achieved. Only two items failed seriously to perform as expected. These were the radios which Brad Washburn had very generously loaned us, and the Budd Davis packs which Dick McGowan had secured for us in Seattle. The radios turned out to have passed their prime as instruments of communication so were not used after the first couple of days above Base Camp. Unfortunately the packs could not be abandoned so easily so they were dragged, rolled, cursed, and kicked clear up to Camp VII. All hands agreed, however, that the trip would have been rather on the dull side if we had not had the Budd Davis packs along to stimulate our conversational flow. Each morning started with "the Budd Davis Hour" in which we moved in teams from pack to pack making repeated mass attacks upon their frozen intricacies, while at night we would often join together to ease our emotional tension with a few rousing choruses of "Hang down your head, Budd Davis" (to the tune of *Tom Dooley*).

Our food was purchased and packaged by the Foundation for Alpine Research in Zürich, Switzerland, and since there was very little time for them to make up the shipment, there could be little or no discussion of the items included. George had time only to send them a list of suggested items such as peanut butter, boned chicken, and concentrated orange juice. It was therefore small wonder that parts of our menu did not come out

PLATE 2

Photo by William Unsoeld

MASHERBRUM FROM THE HUSHE VALLEY near Kande.

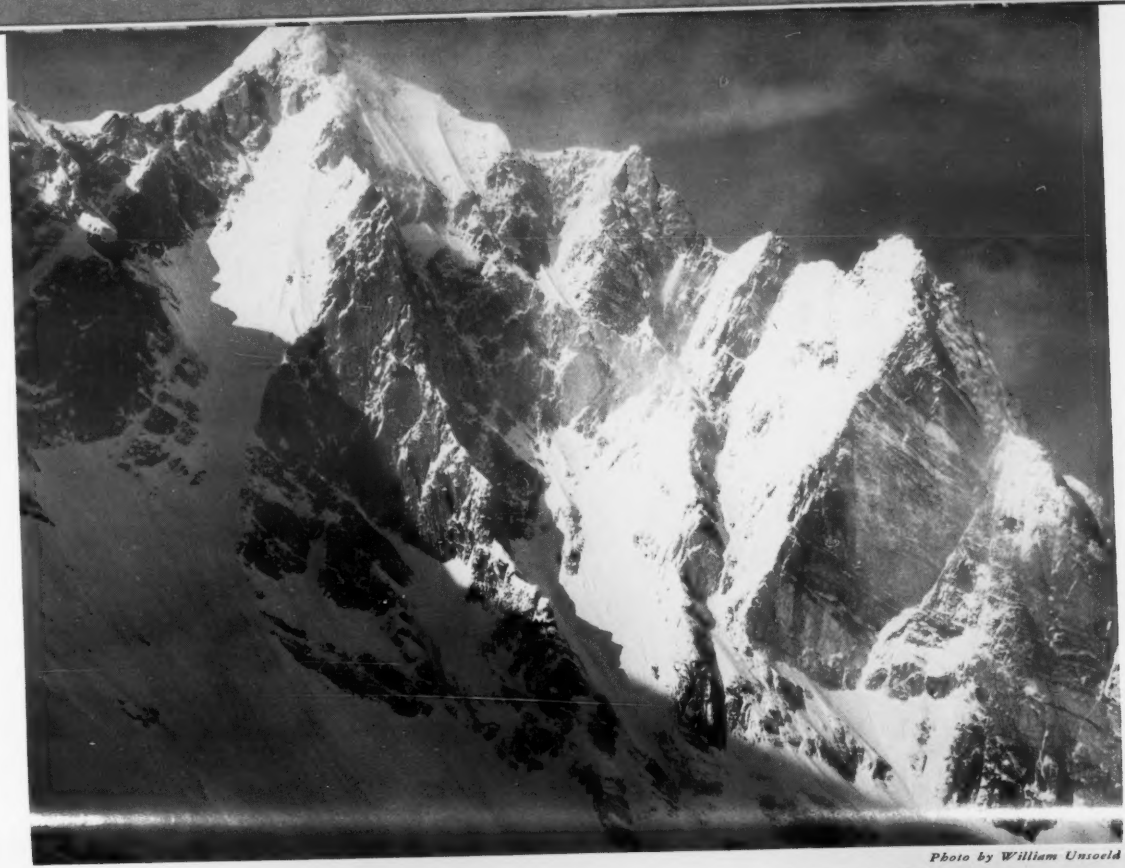


Photo by William Unsoeld

PLATE 3

SERAC PEAK FROM CAMP II. Climbed by McCormack and Abdul Rahim.

PLATE 4

HIGH ALTITUDE PORTERS. Rear row: Abdul Rahim, Mohammed Hussain, Hussain; front row: Qasim, Ghulam Rasul (Sirdar), Rahim Khan.

PLATE 3

SERAC PEAK FROM CAMP II. Climbed by McCormack and Abdul Rahim. *Photo by William Unsoeld*

Photo by George Bell

PLATE 5

DESCENDING FIRST ICEFALL between Camp I and Base Camp.

PLATE 6 *Photo by George Bell*

SUMMIT PYRAMID, Unsoeld belaying.

VIEW FROM CAMP VI. From left to right: Masherbrum IV, III, II and Hidden Peak.

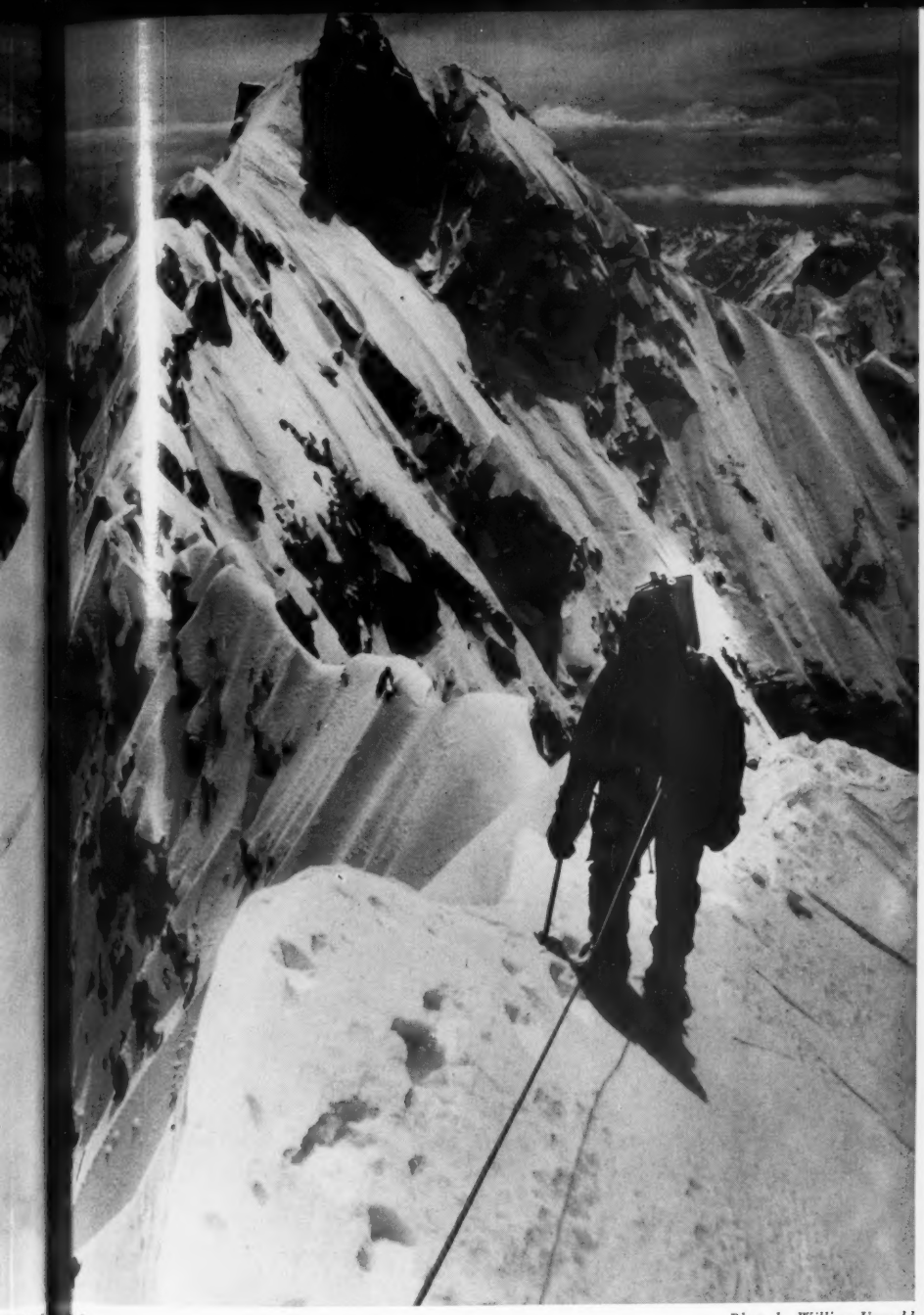
PLATE 7 *Photo by Richard Emerson*

PLATE 5 **DESCENDING FIRST ICEFALL between Camp I and Base Camp.** *Photo by George Bell*

Photo by William [illegible]

PLATE 8

BELL IN GULLY LEADING TO SUMMIT RIDGE.



William U[illegible] 9

Photo by William Unsoeld

BELL ON SUMMIT RIDGE. West Peak in background.

Photo by William Unsoeld

PLATE 10

BELL ON SUMMIT OF MASHERBRUM. K2 on left.

quite as expected. The boned chicken, for example, turned out to include upwards of 30 per cent bones per can. Doubtless a semantic mix-up in which "boned" was understood as describing a desirable quality rather than a process. The concentrated orange juice proved to be unconcentrated, leaving us with but six fluid ounces for six man-days. We did find it handy for flavoring our tea. The tea itself came from an amazing number of exotic species. "Lindenblüten" was clearly made from the blossoms of the linden tree, while "Hagebutten" was just as obviously made from hag's blood. Flavors unfortunately agreed for the most part with etymologies, and great was the rejoicing when a rare packet of ordinary Ceylon tea was unearthed. In general, however, our diet was quite satisfactory, as was evidenced by our strong appetites even at the highest camps.

With the food, equipment, and party secured, Nick flew on ahead to line up customs clearance and porters in Pakistan. The bulk of the rest of the party rendezvoused in Zürich where we were royally entertained by members of the Alpine Foundation. One night in particular will long be remembered for our encounter with *der Balkon*. This was a climbing problem popular with Swiss students frequenting the Gottfried Keller wine cellar. After an excellent dinner as guests of the Foundation, we were invited to try our climbing skills on this historical rafter. The object was to wiggle up and over the rafter through the ten-inch space between it and the ceiling. After Emerson, Bell, and Unsoeld had been thoroughly humiliated through their ludicrous struggles, two of the Swiss students present easily negotiated the course and were rewarded with a free glass of wine which had to be drunk while hanging upside-down from the rafter. Things looked black for the future of the expedition until Hans von Gunten, member of the successful Swiss summit party on Everest, also tried and failed. We all agreed that if failure on *der Balkon* was a criterion for success on Everest, then our chances must be excellent on Masherbrum. However, we were still somewhat relieved when Hornbein and McCormack managed to master the pitch and salvage some remnants of our prestige.

From the cool efficiency of Zürich we jetted into the blistering confusion of Karachi. Nick had lined up customs clearance for us there and gone on to Rawalpindi, and so we were able to clear all our gear through to Pindi in the respectable time of four days. Another week was spent there waiting for the weather to clear for a flight into Skardu. This flight must surely be one of the most hazardous regularly scheduled runs in the world. It was the first time any of us had had to climb on the freight scales in person before being allowed aboard the aircraft. When the weather finally did

PLATE 10

BELL ON SUMMIT OF MASHERBRUM. K2 on left.

clear enough to allow a group of us to depart, it was with some reluctance that we took leave of Colonel Eric Goodwin, with whom most of us stayed while in Pindi. Colonel Goodwin's beautiful home has been the headquarters for a majority of the Karakoram expeditions as they wait for the Skardu flight, and the quality of hospitality dispensed by Eric and his brother, Bill, now has an international reputation.

On May 22, our entire party was assembled together for the first time, along with our five and a half tons of food and equipment. After the customary repacking orgy at the Skardu rest house, we were ready on the 23rd to begin the 100-mile hike into Base Camp. Nick had been most fortunate in securing the services of the best high altitude porters who had been with him on Hidden Peak in 1958. Since they were not *Sherpas,* we followed Nick's nomenclature in referring to them collectively as "HAPs". For Sirdar there was Ghulam Rasul, a slightly built man with a sporty moustache and an overwhelming sense of humor. His complete lack of authoritative display led some of us to question his ability to handle our 180 porters, while his build seemed to preclude his usefulness as a load carrier on the peak itself. Suffice it to say that without any apparent loss of humor, Rasul held the entire line of porters together in a compact column during the whole seven-day approach march, and that on the mountain he not only handled the HAPs with consummate ease and efficiency, but also proved himself an outstanding load carrier.

Of the other five HAPs, Abdul Rahim was the stand-out. He was very nearly left behind because of a heart condition which showed up in his physical, but was included at the last minute because of his fine showing on Hidden Peak. Of all the HAPs, Abdul most resembled the Sherpas in his anxious concern over the welfare of the Sahibs. He eventually became our cook in addition to his other duties and proved himself one of the best carriers in the group. Mohammed Hussein was the strongest of the lot—indeed, he had been the chief means of evacuating George Bell from K2 in 1953 when George was suffering from frostbitten feet. Although older, Rahim Khan could keep up with anyone when it came to load carrying while Qasim had an independent flair which enabled him to take over command easily if Rasul was absent. Only Hussein might have been classed as somewhat lacking in spirit and even he performed extremely well at high altitude and never refused a task which was set him. By the end of the trip, those of us who had experience with the famed Sherpas were willing to admit that our crew of Balti HAPs easily equalled the best of their more famous counterparts in nearly all departments of expeditionary mountaineering.

On the 23rd of May we started the trek to Base Camp, and a more than usually ghastly one it turned out to be. The route led first along the bank of the Indus—flat, dry, sandy, and blazing hot. For most of us—fresh from sedentary jobs—the 40-pound packs for the first day's march of eighteen miles proved just about our physical limit. The party as a whole raised the most sensational crop of blisters that any of us had ever witnessed. Standard marching gear came to include a needle stuck in the hat band for draining one's feet during the occasional breaks in the day's march. The brand-new Bally Himalayan boots we were wearing came in for some unkind comment that first day, but on the second day's march of 20 miles, it was generally hips and shoulders which generated the complaints. Camp the second night resembled nothing so much as a hypochondriacs' convention as we all did the "Sobbin' Sahib Shuffle" along the bank of the Shyok River into Gwari. There was really some question in our minds at this point as to whether or not we would recover in time to field a team capable of leaving (or even reaching) Base Camp. However, the next two days into Khapalu were relatively short ones, allowing us a partial recovery.

At Khapalu we had a welcome rest day while the loads were put across the Shyok in readiness for the trip up the Hushe to Base Camp. The morning was spent anticipating the lunch to which we had been invited by the Rajah of Khapalu—while the afternoon and evening were spent recovering from it. The Rajah himself was the seventy-second in the line of hereditary rulers who had inherited this little section of Baltistan and we listened with fascination to his tales of the past history of his domain. Among other interesting items of local lore, he informed us that the nearest translation of "Masherbrum" would have to be "Doomsday Mountain."* Though this lugubrious bit of information had some effect on the spirits of the party, it had none at all upon our appetites. We still indulged so immoderately in the curried chicken, pâtisserie, and tea which were spread before us that it was with some discomfort that we mounted the bouncy little ponies with which the Rajah had equipped us for the trip back to the camp.

The next morning the ferrymen huffed and puffed us safely across the Shyok on their goatskin *zakhs* and we started on the last three days' march into Base Camp. The huffing and puffing didn't go directly into the paddling as much as it did into the inflated goatskins which exhibited a distressing tendency to deflate in the middle of the stream. One ferryman of unusual

* Major General M. Hayaud Din states, "In the local dialect 'Masher' means 'Queen' and 'Brum' means 'Peak'. Therefore the meaning is 'Queen of Peaks'."—*Editor.*

lung-power seemed to do nothing during the crossing except crawl from skin to skin giving each a judicious injection of air. At the end of our first day's march up the Hushe, we had our first view of Masherbrum. Beautifully framed at the head of the valley, it completely fulfilled our highest anticipations of grandeur and austerity. Even at a distance of two days' march, we were properly impressed by the apparent angle of the final snow couloir leading to the summit ridge. The photographs taken by the British expedition of 1957 were closely examined and one great alteration could clearly be seen to have taken place in the intervening years. The great band of ice cliffs, which had blocked the eastern edge of the upper part of the southeast face in 1957, had clearly extended themselves a much greater distance across the face to the south. Even from this distance it appeared likely that we would have to make a major detour in order to circumvent this unexpected obstacle.

An easy day's march into the last village in the valley (the village of Hushe itself) and we were ready for the final day's march into Base Camp. Previous parties had warned of the ruggedness of this stage, so we planned on a very early start. We even decided with great reluctance to pass up the performance by the dancing girls of Hushe who are famous throughout Baltistan for their artistic gracefulness. Bell, McGowan, and I set off before six A.M. with Rahim Khan to select the site for Base while the main party started some two hours later. Rahim Khan had been with the British party and led us easily through the beautiful cedar forest at the head of the Hushe valley. A wicked scramble across the loose surface debris of the Masherbrum Glacier brought us onto a faint track running along the crest of the lateral moraine. This we followed easily until it disappeared under the snow fields while we were still some hours short of the site for Base Camp. The brilliant sun was sapping our energy and the altitude was making us thankful for our light packs when, at about three P.M., we finally dragged up to the junction with the Serac Glacier where Base Camp was to be located at about 13,500 feet. The deep snow and rough going of the last few miles led to grave doubts as to whether the porters would be able to make it clear to camp. Many of them were barefooted, they all carried between 60 and 70 pounds (with several carrying 100-pound sacks of *ata* [coarse flour—*Editor*]), and the march from Hushe was at least 12 miles over some very rugged terrain. To add to our concern, we knew we would have to pay off all the porters in time for them to get safely back over the snow before nightfall—and this paying off process itself was always time consuming. It was, therefore, with the utmost relief (not to mention astonishment) that we suddenly spotted the first of the

coolies coming into sight below camp only about *thirty* minutes after we had arrived! This was truly a fantastically fast carry over very difficult ground and it enabled us to pay off all the men and bid them farewell by 5:30 P.M. With our tents up, supper started, and our mountain of supplies and equipment safely dumped at the very foot of the peak, we could finally relax with a sigh of relief as we looked forward to the start of real mountaineering.

As we peered up at the slopes of Masherbrum from Base Camp, the route did not appear particularly difficult. Foreshortening cunningly concealed the full 12,000-foot sweep of the peak before us. The Serac Glacier rose steeply towards Serac Peak, but to our optimistic eyes there appeared to be plenty of route possibilities up its smooth, white surface. Above Serac Glacier rose the great, white flank of the Dome, on top of which we planned to place our Advance Base Camp at about 21,000 feet. Behind the Dome lay a large upper basin stretching away to the foot of the southeast face which swept up the last 4,000 feet to the summit. From the pictures and descriptions of previous parties, the route and terrain were quite definite in our minds, but this very familiarity led us to seriously underestimate the labor that would be required to translate our theoretical route into actuality.

In one day the organization of Base Camp was completed. Food boxes were sorted, personal gear packed, radios tested, and lectures on the oxygen apparatus and on high altitude first aid delivered. The weather had been so consistently hot and cloudless that all haste was made to take full advantage of it. At 5:30 A.M. on the first of June, Emerson, McGowan, Hornbein, and Jawed headed up the first icefall of the Serac Glacier in search of a route to Camp I. At eight A.M. we got a weak radio signal from them from high in the icefall. The message was unreadable, but by prearrangement they reinforced it with flashes from their signal mirror which meant that they had found a route and that we could start up with the first carry. By ten A.M. the remaining six sahibs and five of the HAPs were packed and set out to follow the trail of flagged wands which the scout party had left behind them.

As we trudged up the center of the icefall, its smooth-seeming surface revealed itself as a horribly chopped-up maze of seracs, ice walls, and crevasses. The HAPs, who had been here before, continually urged us to swing to the right into the great gully which bordered the glacier, but the threat of avalanches from the walls above this "Scaly Alley" (as it had been christened in 1938 by the British) led us to disregard their advice. As the blazing sun softened the snow and evaporated our energy the pace

grew slower and slower. The route was also forced higher and higher on the steep left wall of the central groove until finally the soft snow made it nearly impossible to proceed with our heavy packs. At this point Hornbein and Jawed appeared above us on their descent and warned us that the route was even steeper above. They advised us to swing back over to Scaly Alley where Emerson and McGowan were exploring for a route down. By the time our party of eleven had unwound a track over to the Alley, our energy was at an end, so loads were dumped and we mushed back to Base Camp by the middle of the afternoon. Although we had argued strenuously with the HAPs against the advisability of using Scaly Alley, it was the only route used throughout the rest of the expedition. We did notice a few signs of fresh avalanches in it later in the season, but luckily none of them arrived while the Alley was in use.

The next day fifteen of us made a strong carry to the excellent site which had been selected for Camp I. The Serac Glacier itself was broken into three distinct icefalls. Camp I was located at the top of the second icefall at about 15,500 feet. Here McCormack and I were established to put in the route to Camp II, while the rest of the party returned to Base for another carry. On the 3rd of June we unwound an extremely devious route through the upper icefall, along the edge of Serac Basin, and finally onto the lower slopes of the Dome itself, where Camp II was placed at about 19,000 feet. Great care had to be exercised in crossing some very fragile snow bridges and it was clear that this route would be subject to major changes as the season progressed, but the greatest obstacle along this part of the route was the heat. With the icefall acting as a great reflector, the snow quickly softened until progress became extremely laborious. Any portion of the body that was exposed to the sun ran the risk of serious burn despite continual application of various sun creams and ointments. Hornbein was finally so badly affected that he devised a bandana mask which covered his entire face with the exception of two eyeholes. Truly a fearsome sight was the "Red Raider" as he dodged in and out of sight among the séracs.

In the next three days loads were relayed to II while a group of sixteen Hushe men completed several mass carries from Base to I. So effective was this Hushe force that within a week of reaching Base Camp, it was possible to evacuate it and move everyone on up to the higher camps. By the 5th of June, Jawed, Emerson, McGowan, and I were established in Camp II ready to tackle the route to the top of the Dome. The altitude hit Emerson so hard here that he had to retreat to a lower camp, and a dose of over-salted mush put Jawed temporarily out of action, but on June 8, McGowan

and I slogged out a track up the steep, unconsolidated face of the Dome and into Camp III at 21,000 feet. Behind Camp III (which was to be our Advance Base) the large upper basin stretched off towards the foot of the final southeast face with the cliffs of the south ridge resting on the left and the precipices of Fanny Peak on the right. Hovering over the crest of the south ridge appeared the summit itself—still nearly a vertical mile above us.

For two more days the weather continued clear and warm. Then, on June 11, the clouds finally arrived and it began to snow. We did not know it at the time, of course, but this spell of intermittent cloud and snow was to last a full 24 days. Despite the poor visibility, Bell, McCormack, Emerson, and Hornbein made repeated sorties from Camp III, flagging in a little more of the route towards IV each time. The rest of us made carries from II to III as well as two quick trips to Base Camp to pick up certain food items which proved to be scarce in the high altitude rations. The continual fall of fresh snow made the trip between Camps II and III a real nightmare as each day saw the necessity of breaking in the track anew. It was with great relief that we dragged ourselves up the interminable white slopes on June 16 with the last critical items from Camp II on our backs. McCormack and Emerson were both suffering from the altitude and various internal complaints and had to drop back down to Base for a rest. Jawed was just recovering from a four-day siege of snow blindness, but as a whole the party was in remarkably good shape at this time.

June 17 saw McGowan and me moving out with three HAPs to establish Camp IV. The entire mountain was covered by a light mist through which the sun burned with a fierce intensity. Only occasionally could we catch a glimpse of the peak which was now beginning to come into view above us, while underfoot the soft, powdery snow reached to our knees. Laboring across the plateau behind Camp III with frequent lead changes, by midmorning we reached the steep ice incline leading up to the upper basin at the foot of the southeast face. Here we fixed a rope across an icy patch and by one P.M. we arrived at the cache of supplies which had been dumped by the previous reconnaissance parties. Since the weather now turned extremely cold with the visibility getting worse and worse, we finally pitched Camp IV on a bench in the snow ridge edging the glacier at the foot of Fanny Peak at around 22,000 feet. The HAPs set off quickly for Camp III after dropping their loads while Dick and I attacked the problem of frozen gaiters. After a long wrestle, we managed to wrench off boots and gaiters together in a single great chunk of iced leather and fabric. The next morning we broiled each boot an average of

fifteen minutes over the butane stove before the gaiter could be removed. More toasting enabled us to get into our boots, and a final touch of heat allowed us to scrape back into the gaiters.

The search for a site for Camp V was greatly hampered by the visibility which had deteriorated in the night. Traveling partly by compass and partly by instinct, and carefully wanding the route every 40 to 50 feet, we pushed slowly up along the foot of the southeast face and finally up onto the flank of the east ridge. In between partial white-outs we caught occasional glimpses of the route ahead, but became increasingly worried about the absence of any apparent camp site. By eleven A.M. the lack of visibility had discouraged us to the point of turning back when one last burst of energy carried us up a steep slope to a perfect camp site atop a level snow crest on the side of the east ridge at about 23,000 feet. Directly opposite the camp was the obvious start of the route up the southeast face and so we marked the site with wands and schussed back down to Camp IV in forty minutes. There we met Bell, Clinch, and Hornbein who had come up from III with the HAPs. As we sat talking, the peak suddenly cleared and we had a discouragingly clear view of the route above. It was enough to evaporate instantly our earlier optimism of an easy trip to the top. The route to Camp VI seemed to offer only a certain objective danger from some huge ice-cliffs which overhung the route, but above VI we could see the difficulties forced upon us by the great extension of the ice cliffs. We would undoubtedly be forced out onto very steep slopes of snow or ice and would have to traverse back horizontally for at least 1000 feet before we would be able to enter the final couloir leading to the summit ridge. This couloir was the biggest question of the climb. Don Whillans and Joe Walmsley, of the 1957 British party, had reached the bottom of it and found the snow to be too soft to be negotiated. They had then turned to the easy-looking rocks on the left edge of the gully and spent seven hours while gaining about 300 feet. Here they drove a large piton to which they fixed a 300-foot nylon rappel rope which had been left in place. They suggested that if the couloir again refused to go we should make use of their fixed rope to gain quickly the first 300 feet of the couloir. This would still leave us about another 200 feet of very difficult rock climbing before reaching the summit ridge. With this rock work in mind, we were heavily equipped with the pitons, bolts, and stirrups that make up the technical rock climber's paraphernalia, but the mountain had other plans for us.

By June 21 Camp V was consolidated and occupied by three Sahibs and four HAPs ready to make the lift to Camp VI. Up until now we had

abided strictly by the rule "Climb high and sleep low." The reconnaissance of each new camp had been carried out by a team sleeping in a lower camp. After the route had been established, the same team would move up to occupy the new camp while the other teams began the supply carries. This procedure we believed to help in our acclimatization since it prevented a long stay at a new altitude the first time it was attained. The weather had never completely cleared since June 11, but now a period of slight improvement led us to depart from our previous procedure in order to speed up our progress.

Early on June 22 McGowan and I, who had been chosen as the first assault team because of our physical condition, left Camp V to locate Camp VI. Clinch and the four HAPs at V were to carry up the camp behind us that same day so that the first summit try could be made the following day. The accumulation of soft snow on the southeast face made progress extremely difficult, some places requiring a veritable trench to be shoveled out. Along the edge of an ice rib firmer footing was found, but here the slope steepened until it became necessary to rig fixed lines for the sake of the loaded team which followed. We had earlier picked a large sérac jutting from the face as a likely place for Camp VI, but the visibility was so poor that from a distance we could not tell whether there was a suitable site there or not. Since it was getting late in the afternoon and the weather was steadily deteriorating, we made a desperate push for the sérac and were really overjoyed to find a tiny platform at its base. This ledge was restricted on both sides by partially concealed crevasses, but the great bulk of the sérac towering between us and the possible avalanches from above gave it a most cozy appearance. Nick soon appeared out of the icy mist with the HAPs, making the carry a complete success. This was a notable feat for our four Baltis. Ghulam Rasul, Rahim Khan, Abdul Rahim, and Qasim had all carried heavy loads to 24,000 feet in miserable weather with never a murmur of reluctance. High altitude porters just do not come any better than these four—even in the ranks of the redoubtable Sherpas.

The plan now was for Dick and me to move out above Camp VI to prepare the steep slopes leading over to the foot of the couloir. We were to work without oxygen, but if all went well we were to turn our route preparation into a summit try. At the same time Bell and Hornbein were to move up to Camp VI in support of the first team and to help in any further preparation of the route. As soon as the way to the couloir was secured, Dick and I would make an all-out summit attempt using oxygen.

As it turned out, the extreme angle of some of the slopes above VI,

coupled with the lack of acclimatization, limited the first day's attempt to about 400 feet! However, we did get in several fixed ropes over the steepest spots and succeeded in locating a route around the end of the barrier ice cliff. Ahead of us stretched smooth, steep slopes clear to the bottom of the couloir. The angle of these slopes and the softness of the snow led to some worry about possible avalanches, however, and so it was agreed that as much of the route as possible should be secured by fixed ropes before being used by a summit party.

Back in Camp VI the support party of Bell and Hornbein arrived, but through some mix-up no extra rope was available as far down as Camp IV. George and Tom solved the difficulty by retrieving the ropes which had been fixed between V and VI, and on June 25 we were all set for the first serious summit attempt. Dick and I were to use oxygen in an all-out bid for the top, with George and Tom following behind to put in the fixed ropes to safeguard our descent.

By getting up at one A.M. we were able to get started by about 2:45. Breakfast of grape-nuts doused with hot cocoa went very quickly, but the job of dressing and equipment adjustment seemed to take forever. The fantastic agglomeration of ropes, cords, straps, tubes, and lanyards stubbornly refused to yield to any attempt at comfortable arrangement. Mitten cords tangled with piton-hammer lanyards, rope slings pinched oxygen tubes, and camera straps fouled pack straps. Finally all was adjusted, the oxygen masks were snapped in place, and the valves opened on the first of the two bottles that we each carried. The fixed ropes helped greatly and the previous high point was reached easily in about an hour and a half.

Although progress had been quite rapid up to this point, there was already some question as to the effectiveness of the oxygen apparatus. There appeared to be no serious malfunction aside from an occasional frozen valve, which was quickly cleared with the pick of an ice axe, but the benefits of a 4-litre flow seemed to be far less than expected. Dick noticed that he was occasionally taking off his mask in order to breathe more easily which was certainly not the designed effect of the set. I became so fascinated with the faint clicking of the various valves in the mask that I found myself hyperventilating in order to synchronize some of the off-beat clicks. Neither of us noted any discernible difference in fatigue or speed while the oxygen was in use so we were naturally glad when a bottle had been expended and we could free ourselves of the extra eleven pounds. The empty bottles were left in the snow and later proved very useful as anchoring points for fixed ropes. However, they were surely the heaviest pickets which had ever been carried so far for the purpose.

The slopes leading upwards towards the couloir proved to be predominantly soft, heavy snow which required immense effort to traverse. All possible effort was made to gain altitude, but often the consistency of the snow made any upward progress impossible. On these stretches the best that could be managed was a horizontal traverse. Finally a rib of harder ground was reached where steps could be kicked vertically upwards. About 200 feet below the rocks of the south summit, the traverse to the foot of the couloir was started. Here a network of small schrunds offered easier climbing along their lower lips till we reached a large schrund, which formed a level area large enough to sit on for lunch. Although the strenuous exertions on the slopes below had left both of us tired, it is interesting to note that at this point we were still sure of the summit. Our altimeter read 25,000 feet and the foot of the couloir apparently lay only a few rope-lengths ahead.

After lunch our mood underwent a sudden change. After only two leads we suddenly realized that it was already two P.M. with what was sure to be the most difficult part of the climb still ahead. The weather had also deteriorated rapidly and it was now beginning to snow with vigor. Thinking of the effort required to surmount the long slopes below, we discussed a bivouac, but the bad weather counseled against such a plan. Since it was now clear that an additional camp would be necessary, we leveled out a tent site at our lunch spot and cached all the extra equipment. The trip back to Camp VI was complicated by the heavy snowfall which continued. Several small surface slides slowed progress, and so it was not until six P.M. that we stumbled into camp to be greeted anxiously by Bell and Hornbein.

Since the heavy snow continued, it was decided to retreat to Camp V. Food was ample at VI, but Buta-gas was running low. Conditions for the descent were far from ideal. A complete white-out limited visibility to only a few feet. To complicate matters further, the frequent avalanches had taken out large sections of the wanded trail. It was while we were puzzling over one of these missing sections that disaster very nearly overtook us. Just as we decided to move sharply to the left to avoid the large ice cliffs which started a few hundred feet below, a large surface slide enveloped us. Our whole party was tumbled head-over-heels towards the cliffs below. Fortunately Bell and I managed to get our axes through the slide into the slope, stopping the party a safe distance above the drop-off. Tom Hornbein, who had been last on the rope, was now far below the rest of the party, having slid at least 200 feet.

Although no one seemed seriously injured, it soon appeared that Dick

McGowan was far from well. Acting very queerly, he suddenly spun in his tracks and pitched head-long into the snow. He was stretched out flat on a shelf hastily cut for him where Tom could examine him. No physical damage was visible, but he seemed to have inhaled a quantity of ice crystals which had affected his throat and brought on a wild delirium. A miraculous development in the weather at this point speeded evacuation to Camp V. No sooner had the fall been arrested than the snow suddenly stopped, the clouds blew away, and the sun broke through. With the new visibility, it was an easy task to open a new track down to where Nick Clinch and Jawed were breaking a trail upwards from V. Dick was evacuated under his own power, reaching Camp V about an hour and a half after the avalanche had hit. At that moment it suddenly began to snow again and visibility was reduced to only a few feet. It may be that the day of miracles is past, but this lull in the storm leads one to wonder.

Dick's delirium continued throughout the day despite the administration of liquids, penicillin, and intravenous salt solutions, but luckily he rallied in the night sufficiently to make it down to Camp III the next day. This was an especially tough break for Dick since he had been going so strongly up until the time of the avalanche. His recovery at III was rapid, but he never completely regained his previous form.

According to plan, six sahibs reoccupied Camp V on June 29. The night was completely clear and the sky startling with its display of brilliant Himalayan stars, but by midnight a blizzard was again raging. This was the wildest weather that we experienced throughout the trip, extremely heavy snow accompanied by high winds and no let-up for four days. By lying quietly together in the pyramid tent and by eating only half-rations, we were able to stretch our food supply till noon of the fourth day. As the storm still showed no signs of letting up, we then decided that four of us would have to retreat to Camps IV and III while Bell and I would hang on at V as long as possible, hoping for a break in the weather. As Clinch, Jawed, Emerson, and Hornbein left for Camp IV, the tips of the four-foot wands were just visible above the drifts.

As we had hoped, the morning of July 4 dawned clear and bright. George and I headed immediately for Camp VI looking forward eagerly to the ample food stores there. The great amount of snow that had been dropped by the storm had resulted in numerous avalanches which swept the southeast face into a relatively stable condition. In fact the snow in the gully below VI was so hard that instead of laborious step-kicking we were forced into equally laborious step-chopping. Both of us noticed the weakening effects of four days of inactivity. Once or twice we were startled

into furious evasive action by the appearance of large powder snow avalanches cascading over the ice cliffs directly about us, but to our relief these slides were completely dissipated by the wind before they reached the lower slopes.

Camp VI was a complete shambles after the storm. Snow had flowed in around the protecting sérac until both tents had been completely covered. Despite the aluminum poles and fiberglass wands which give great rigidity to the Gerry Himalayan tents, these two were crushed flat to the ground. It took two full hours to dig them out and even then several of the wands and poles turned out to have been snapped in two. Around six P.M. Emerson and Jawed came slowly into VI, having made the long haul from IV in one day. Between the lower camps there was great activity, teams moving up with additional supplies according to the plans for continual support. The sight of all this activity between camps III and V did much to increase the confidence of the four who were wrestling with the problems at Camp VI.

The plan now was for the four climbers at VI to establish two of our number (George and me) at VII. This camp would be located in the schrund at the site of the cache we had made during the previous attempt. Emerson and Jawed would then drop back down to VI to go up again the next day in support of the summit try, and also to form the second assault team. No one at Camp VI showed conspicuous energy on the morning of July 5, but after much fussing with packs and considerable time spent in simply sitting in the sun, the leisurely start was reluctantly made. The pull across the slopes towards Camp VII was just as deadly as we had expected, and it was not until late afternoon that we approached the site of the cache at about 25,000 feet. As we neared the site, we were greatly shocked to discover that even the schrund had been buried in the continual slides which had come down during the storm. No trace of the cache was to be found—all the pitons, ropes, stirrups, and spare oxygen bottles had apparently been swept over the edge of the platform and whirled on down the southeast face. After a frantic search for this crucial equipment, it was given up for lost. Dick and Jawed departed for Camp VI while George and I chopped out a new platform and laboriously set up the tent. Supper was cooked on the tiny, high-altitude Buta-stoves. At least four serious spills were recorded during the meal before we realized that with these compact stoves it is necessary for one man to maintain a continual grip on the precariously balanced pot.

Nervous anticipation precluded much sleep that night and by two A.M. we were awake for good, lying there quietly in our bags, talking con-

tentedly for another hour and slowly gathering energy for the day. Breakfast of Ovomaltine on corn flakes was soon over, and by five o'clock we were booted and spurred and ready to slog. In 45 minutes we crossed the schrund and headed up into the throat of the crucial couloir. An obtrusive band of rock barred its lower end, but a thin tongue of snow pierced through to the main gully above. After a few shivers as crampon points grated on the rock beneath the shallow snow cover, we were safely past the rock barrier. Fifteen feet to the left of the gully the fixed rope left by the Manchester expedition was plainly visible. For 300 feet it dropped in graceful curves over the steep rock. From below, this rock looked deceptively easy, but the memory of their seven-hour struggle with this 300 feet kept us on the snow slope.

The slope itself was steep although not excessively so—possibly reaching a maximum angle of from 50° to 60°. However, the uncertain texture of the snow made progress a grueling problem. I carried a snow shovel in addition to my ice axe, and much of the progress was made by hoisting my body on these two handles, then kicking deep footholds to consolidate the gains. The rising sun focused cruelly into the couloir where not a breath of wind stirred to alleviate the heat. Hour after hour the rope slowly paid itself out and as slowly drew itself in as we gasped slowly upwards. Finally, at eleven o'cock I fell happily across the crest of the summit ridge. George soon joined me and here we sat astride our precarious perch munching a chocolate bar. Below us the northwest face fell sheer away to the Baltoro Glacier, while on the other side the southeast face swooped down unbroken to Camp IV. The cutting wind from the southwest soon drove us from the perch, turning us to face the final problems of the summit ridge.

Ahead lay the first rock step which had been clearly visible from the camps far below. The rock proved to be treacherously rotten, but the technical difficulty did not seem to be extreme. Leaving crampons on, we edged cautiously around to the left of the step. Here the bitter wind was keeping all the rocks frozen solidly in place. Just to give the pitch an authentic ring, I succeeded in pounding in one of the ice screws which represented the only available iron. It worked fine in the rotten rock and soon the step was behind us. Ahead, the ridge became a knife-edge of snow forming a teetery tight-rope to the base of the second step. Here a clean-cut chimney split the right edge of the rock. Even in crampons the rock work went pleasantly except for the hoisting of the pack which was too large to fit into the narrow groove. On the lee side of this final rock step we found a tiny platform just large enough for a lunch stop. Nearly an hour was spent here in the warm sun before the final pitch was begun.

An easy rock crack led quickly back to the snow of the summit ridge which angled gently upward to the summit itself. The snow here proved to be ideally firm, though the angle dropping away to the west encouraged continual belaying to the very top. After only a few more rope-lengths, we reached the top of the highest of the three separated summit crests at 3:15 P.M. A quote from my diary records the impressiveness of the scene:

> To the north loomed K2—surely the grandest of all single peaks. Monstrously isolated, it dominated the scene. To the east bulked Broad Peak and further to the right the four Gasherbrums and Chogolisa. At our feet lay the rubbled highway of the Baltoro showing its traditional ice-ship séracs. Beyond it poured in countless tributary glaciers and along them rose the unimaginable mass of the Karakoram peaks. No picture I have seen has begun to do them justice for sheer ruggedness and uncountability. The Mustagh Tower was the only disappointment. Seen in person, it looked like a walk-up without the magic of Sella's camera to lend it sheerness.

Forty-five minutes on the summit were spent in photography and casual conversation. Pictures were taken of Jawed's Pakistani flag, of Dick McGowan's banner signed by his geography class, and of my pennant from the Oregon State College Mountain Club. As a last act before leaving the top, I knelt down and placed in the snow a tiny crucifix, given me by Colonel Eric Goodwin in Pindi. George waited silently until the end of my brief prayer, then said, "Well, Willi, shall we go down—or up?" In spite of the intriguing suggestion, we picked up our coils and began the descent.

The ridge went quickly on the way back. A long rappel dropped us down into the gully from the top of the first step. Here a 140-foot, quarter-inch manila rope came in handy as a pull-down line. Once in the gully, aluminum rappel pickets were fixed in the snow for a succession of let-downs. The manila line was fixed to the final picket near the bottom of the couloir and left in place to aid the ascent of the second summit party. At eight P.M. George and I stumbled into Camp VII, exhausted and seriously dehydrated. In the night George developed an ominous cough. He complained of being cold and soon had some difficulty in breathing. Alarmed at the possibility of high altitude pneumonia, I laboriously melted a pot of water, made up a lot of cocoa, and began the emergency first-aid treatment which had been recommended to Tom Hornbein by Dr. Charles Houston. (See *A.A.J.*, 1960, 12:1, pp. 189-190 and also elsewhere in this present issue.—*Editor*.) This consisted of the administration of antibiotics, a heart stimulant, and a diuretic. George bordered on delirium for several hours, eerily filling the tent with mindless little nonsense hums, but some part of the treatment seemed finally to help and he dropped off into an uneasy

sleep. The rest of the night was filled with interruptions. The snow stripping off the rocks above the camp swished whispering over the roof of the tent while occasionally a chunk of ice would thud against the fabric. As the platform settled, the tent slowly tilted more and more towards the slope of the southeast face until serious concern arose as to the adequacy of its anchorage. During one particularly prolonged flow of snow, it suddenly seemed as if it were the tent which was sliding rather than the snow. The illusion was so perfect that I jerked wildly across the floor of the tent into George's waiting arms. Our frantic embrace was rather sheepishly disengaged some seconds later, but we agreed that the cost of a moment's dignity was a small price to pay for insurance against the chance of dying alone. By morning George was better though desperately weak.

During the first assault, a support party composed of Jawed, Tom Hornbein, and Dick McGowan started the move from VI to VII. Upon reaching the fixed rope across the ice traverse, however, Dick had had a bad fit of coughing ending with retching. Jawed had led out a full rope length along the traverse when Tom called him back because of Dick's condition. In making the move to retreat, Jawed suddenly slipped from the steps, missed his grab at the fixed rope, and somersaulted down the slope. Dick had had a premonition that a fall was imminent and had warned Tom to put on a belay. Tom had time only to grasp Jawed's rope with one hand while wrapping his other arm around the fixed line. Luckily the climbing rope cut deeply into the soft snow thus absorbing much of the shock, but the fall was still a matter of about 130 feet. While Jawed was still shooting downwards, Dick asked with some interest, "Are your arms going to be strong enough, Tom?" The reply was, naturally enough, "Well, they'd better be." And they were. This fall, coupled with Dick's poor condition, drove the support party back down. As George and I were unable to progress below Camp VII that day, this was a fortunate move since VII would have been incapable of holding five men. Tom and Dick went clear on down to Camp V that day, leaving Jawed behind at VI with Nick and Dick Emerson. This recurrence of McGowan's illness was a sad blow to Hornbein who was in great shape for a summit try. However, he never let his enthusiasm as a climber interfere with his duties as a doctor.

On July 7 the rearranged support party of Nick, Emerson, and Jawed moved up to meet the summit party. George and I started down rather late in the afternoon after our trying night. We met the support group at the fixed rope traverse, where, in the middle of the touchy ice-slope, we exchanged not only news of the summit success, but also my G.I. rucksack

for Jawed's "Budd Davis." The transference of the contents from one pack to the other was no small feat in this precarious position, but the maneuver was considered well worth it to avoid facing the Davis puzzle-combination during a summit try.

The second summit party repitched the tent at Camp VII when they arrived, but conditions were so crowded and the tent still at such an angle that they were unable to get together any supper. This lack of food after his great exertions reacted so violently on Emerson's stomach that when they awakened the next morning before two, he was too ill and weak to participate in the summit try. In fact, the summit attempt very nearly failed to come off at all. While replacing a gas cartridge on one of the two small Buta-stoves, Jawed got too close to the other stove. Suddenly the cartridge in his hands ignited exploding flaming butane all over the tent. Nick threw a pot of water on the flames, but the inner lining of the tent was now afire and things looked desperate. Nick made a dive for the entrance only to find the zipper frozen solid. At the last minute, Jawed managed to smother the flames with a pair of down pants, thus saving the whole party from certain suffocation. This stirring bit of pre-dawn excitement delayed the start until 7:30. Nick and Jawed finally moved out at that time, leaving Dick behind to renovate the camp.

By two, they had reached the col above the couloir, and by 6:15 they were on top. This successful ascent fulfilled one of the main aims of the expedition—to get a citizen of Pakistan to the summit of a major Himalayan peak. Captain Jawed Akhter Khan became the first native of Pakistan to stand atop one of the giants of his homeland, and the honor could not have gone to a more deserving man. Through his continual good humor and willingness to expend any amount of energy in behalf of the party's interests, Jawed had more than earned his favored position on the second summit team. The entire expedition was overjoyed at his success.

Stopping on the summit only long enough for a few pictures and to swallow a dexidrin tablet, the two climbers started their descent after a short 15-minute stay. The descent itself turned out to be much more of an ordeal than had the climb. The rappel on the upper rock step proved to be a time-consuming affair, making it quite late when the first step was reached. The slings of the first party were still in place for the long drop into the gully, but when Nick and Jawed tried to retrieve their rappel ropes, the very tail end of their second climbing rope jammed in the rock just beneath the sling. They were forced to cut the rope which left them with but one climbing rope plus a 20-foot chunk out of their second rope. Having planned to use the pickets of the first party which were 120 feet apart,

they were in very serious straits. It was now dark, they were without any extra pickets, and their next rappel, of course, left them 60 feet short of the second picket. Here Nick demonstrated the value of his long climbing experience. Although he had never before used the method, he had often read about the technique of cutting snow bollards from which to anchor a rappel. This he proceeded to do under extremely trying circumstances. The extra piece of climbing rope was used as a sling, Jawed was sent down on a belay to test the security of the arrangement, and then Nick followed. Thus in perfect safety they negotiated the treacherous descent, but the precautions they took cost a good deal of time. Because Jawed had unfortunately lost a down mitten while on the summit, his hand was suffering considerably before the descent was complete. It was not until 7:30 on the morning of July 9 that the two utterly weary climbers literally staggered into Camp VII, just 24 hours after having left it.

George and I had joined Hornbein and McGowan at Camp V while the second summit attempt was in progress. Since George and Dick were both far from well, it was decided that they should go on down to Camp III leaving Hornbein and me behind to act as support for the summit party. The total lack of movement at Camp VII caused considerable alarm on the day following the second summit attempt. Finally, at 5:30 P.M., Tom and I were greatly relieved to see three figures creep slowly out of Camp VII headed downwards. Their progress was obviously painful in the extreme with Emerson's shouts of encouragement ringing clearly. It was indeed fortunate that Dick had stayed in camp and regained his strength while Nick and Jawed went to the top. Without his energy, the descent to Camp VI would have been next to impossible. As it was, they just managed to creep into VI before full darkness fell.

While Hornbein and I in Camp V had been keeping an anxious watch for the summit party, we had noticed two figures working their way across from Camp III towards Serac Peak. Making slow but steady progress, these two finally reached the top of this impressive peak. It turned out later to have been Tom McCormack and Abdul Rahim who had completed this fine climb.

On July 10 the stretch of good weather ended with a new blizzard. By noon it was so thick that Hornbein and I decided that we had best dash up to Camp VI in order to help the tired summit party in their retreat. In two hours we were only a hundred yards below VI and could dimly see the summit party preparing to leave. Waiting there in the snow, I cheered their flagging spirits with a few stirring bursts from my harmonica and the reunited party was soon on its way down. Having relieved Nick

and Jawed of their packs, we carefully counted rope lengths downwards in order to know when to turn left across the steep ice slopes of the regular gully. After a soup stop at V, we five climbers trudged on down in the developing storm glad to be through with the upper reaches of the mountain under these inhospitable conditions.

The retreat from the Dome and down Scaly Alley was carried out rapidly despite the great changes in the lower part of the Serac Glacier. By July 12 we were all once more gathered in the Big Base Camp tent just 42 days after first leaving it. That night we had a party celebrating not only the complete success of the expedition, but also Dick McGowan's birthday. As we sat there in the familiar huddle of bodies and equipment, our hilarious celebrations were not unmixed with a gentle regret that the show was over. The struggle had been so intense, it had made such demands upon our bodies and spirits, and we had bent our mutual efforts together in such a fierce concentration on the problems at hand that it came as a cold shock to find our goal suddenly behind us. This tinge of quiet sadness would persist for several days as we marched leisurely down the Hushe, finally to dissipate as the goals and interests of our usual lives reasserted themselves. What remained would be the memory of a remarkably experienced and compatible group, fortunately enjoying an unusually intimate bond of fellowship with one another. When such a bond among the climbers is coupled with a high degree of that peculiar companionship which arises between the climber and the peak upon which he struggles, then surely there remains no higher reward for Himalayan climbing to offer.

Summary of Statistics

AREA: Karakoram Himalaya.

ASCENTS: The first ascent of Masherbrum (25,660 feet), by William Unsoeld and George I. Bell, July 6, 1960 and by Nicholas B. Clinch and Jawed Akhter, July 8, 1960.

The first ascent of Serac Peak (about 22,000 feet), by Thomas McCormack and Abdul Rahim, July 9, 1960.

PERSONNEL: Nicholas B. Clinch (director), George I. Bell (climbing leader), Captain Jawed Akhter, Captain Imtiaz Azim, Richard M. Emerson, Thomas F. Hornbein, M.D., Thomas McCormack, Richard E. McGowan, Captain Akram Quereshi, William Unsoeld.

M.F.L

The Mountain of Storms—Dhaulagiri, 1960

NORMAN G. DYHRENFURTH

"LOOK HERE, Maurice, it's absolutely unclimbable, that Dhaulagiri! It's fiendishly difficult!"* Those were the words of Lionel Terray in 1950 as he reported the results of his reconnaissance to Maurice Herzog.

Since the ascent of Dhaulagiri marks the end of the "Golden Decade" of the 8000 meter peaks, it might be well to deal briefly with the history of the peak known to European climbers as "Berg der Stürme" (Mountain of Storms). Dhaulagiri, contracted from Dhavalagiri, means "White Mountain" in Sanskrit. According to the Survey of India's most recent and official calculations, its height is 26,810 feet, or 8172 meters. More recent figures of 26,975 feet or 8222 meters are not official.

Based on the findings of the 1950 French expedition, in 1953 a Swiss team under the auspices of the Akademischer Alpen Club Zürich approached the great peak from the west, along the Mayangdi Khola. A base camp was established on the Mayangdi Glacier at 14,500 feet, at the foot of the north wall of Dhaulagiri which extends over a width of seven miles, with its black ledges, icefalls, névés and pear-shaped rock ribs. A first reconnaissance did not appear to hold out much hope for a successful ascent. The lower rock portion of the mountain is encircled by a glacier belt, the narrow névé terrace of which is guarded by enormous séracs. Above this terrace the mountain goes straight up for another 6500 feet, its steep slopes exposed to every avalanche and without any apparent possibility of establishing further camps. Despite this rather gloomy first appraisal, the men fought a very gallant battle and succeeded in reaching an altitude of just under 25,000 feet, to the left of the now-famous "pear" hanging from the west ridge. At this point the climb had to be abandoned because of dangerous snow conditions and extremely difficult terrain. On the way down three Sherpas slipped and fell 1600 feet, but miraculously they came to rest just above the séracs and escaped with shock and a few superficial scratches. Before the men started back, they carried out two

* Maurice Herzog, *Annapurna*, New York, 1952, p. 69.

reconnaissances on the northeast and southwest cols of Dhaulagiri, the former—the objective of the French in 1950—was reached after a long and dangerous ascent. The northeast ridge, starting from this col, appeared to be as difficult as the north wall recently abandoned. Another group went up to the southwest col. The panorama was stupendous, but the aspect of the south face of Dhaulagiri was one of the most horrifying the climbers had ever seen.

The following spring a large and well equipped Argentine expedition under the leadership of Lieutenant F. G. Ibañez attempted the mountain over the same route pioneered by the Swiss. At 23,600 feet, Camp VI was erected on a tiny platform which had to be blasted among limestone slabs lying like roof-tiles. As late as May 30 four Argentinians and five Sherpas climbed up through a rock and snow chimney to about 25,000 feet, where Camp VII was set up at the foot of the steep pitch that blocks access to the main ridge. The Tirolean-born Gerhard Watzl and the famous Sirdar Pasang Dawa Lama pushed on toward the summit on May 31. They surmounted the wall and emerged on the west ridge but encountered such difficulties there that they had to move out onto the ledges of the dangerous south face. Oxygen was used on this climb by Watzl. As late as five P.M. the two men were again on the main ridge, at about 26,000 feet, where they had to dig a cave in the snow for a bivouac—without sleeping bags or supplementary clothing. After a very bad night they were forced to retreat, fighting their way down in deep fresh snow. One Sherpa fell during this enormously dangerous descent but suffered only a bruised chest and a deep head wound. The leader, Ibañez, lost his crampons on the way down, which made the descent difficult and even dramatic. Ibañez stayed at Camp VI, awaiting crampons that were to be sent up from Camp V. When two Sherpas reached him the next day, his feet were so badly frostbitten that he was unable to put them on; in fact he could not move under his own power. A rescue party under frightful difficulties succeeded in bringing the sick leader down and off the mountain, but despite every attention Ibañez died at a Kathmandu hospital.*

1955 saw another attempt over the north face by six Germans and four Swiss. Again Pasang Dawa Lama was Sirdar, but this expedition fared worse than its predecessors: Exceptionally severe snow storms and avalanche danger forced withdrawal at less than 24,300 feet.

* For further details about this expedition, see *The Mountain World*, 1954, pp. 71-81. For subsequent expeditions, see *A. A. J.*, 1955, 9:2, p. 175-6; 1956, 10:1, p. 140; 1957, 10:2, pp. 169-70; 1959, 11:2, pp. 323-4; 1960, 12:1, pp. 157-8.—*Editor.*

In 1956, a second Argentine team under Colonel E. Huerta reached an altitude of almost 25,000 feet.

On May 17, 1958, a Swiss team under Werner Stäuble established Camp VI at 24,800 feet, but violent storms and heavy snowfalls made all further progress impossible. Among the team members were Dr. Georg Hajdukiewicz and Max Eiselin, who expressed their conviction that the northeast ridge might offer better chances for success.

1959 was the year of the Austrians. Based upon the recommendations made by Dr. Hajdukiewicz and Max Eiselin, a strong team under the leadership of Fritz Moravec for the first time reconnoitered the northeast ridge above the northeast col. They established a series of camps, with the highest, Camp VI, at 24,250 feet. On May 25 Karl Prein and again Pasang Dawa Lama—his third attempt—pushed on toward the summit, but severe winds prevented their climbing higher than 25,250 feet. Attempts on the two following days were equally unsuccessful. About a month earlier one of the team members, Heinrich Roiss, had fallen into a crevasse near Camp II and died before he could be extricated. Upon returning from the mountain, Pasang Dawa Lama declared the peak "unclimbable."

This brings us up to 1960, when a predominantly Swiss team was formed under the leadership of Max Eiselin. The other Swiss were Ernst Forrer, Ernst Saxer (pilot), Jean-Jacques Roussi, Albin Schelbert, Michel Vaucher, Hugo Weber and Emil Wick (co-pilot and mechanic). From Austria came Kurt Diemberger, who had scaled Broad Peak with the late Hermann Buhl; from Germany, Peter Diener; from Poland, Dr. Georg Hajdukiewicz and Adam Skocylas; I alone represented the U. S. A.

For the first time the government of Nepal granted permission to use a light-weight airplane for landings of men and supplies on glaciers and snow-fields, a Swiss-built Pilatus-Porter PC-6, with a Lycoming engine, especially designed for high-altitude flights and landings. Since we hoped to track down "Abominable Snowmen" from the air before and after the assault on Dhaulagiri, the plane was christened Yeti. Six men reached Nepal aboard the Yeti, five traveled from Europe by boat, Roussi was already in Kathmandu as a member of the Swiss Technical Aid Group, while my wife Sally and I traveled by air across the Pacific.

According to plans worked out in Switzerland, the Yeti was to fly men and equipment to the village of Tukuche, situated in the Kali Gandaki valley between Annapurna and Dhaulagiri. There, at about 9000 feet, everything was to be stored, so that in the event of some mishap to the airplane all materiel could be carried by porters across Dapa Col and

French Col to Base Camp on the Mayangdi Glacier. In case of too much snow for local porters, an alternate plan called for repeated landings at the base of Dhaulagiri's East Glacier, where we would establish an "acclimatization camp" at about 13,000 feet. From there we would make minor ascents up to 18,000 feet. During this acclimatization period of about three weeks, the Yeti would make frequent landings on the northeast col to build up Advance Base at 18,700 feet. By April 20, at the very latest, all men would be well acclimatized and firmly established on the northeast col.

The first reconnaissance flight on March 23 was magnificent. After flying past the Ganesh Himal, Himalchuli, Manaslu and Annapurna II, we came so close to the terrifying ridges of Machapuchare that we felt like reaching out and touching the mountain. Annapurna I, "La Grande Barrière" and the Nilgiri Peaks towered above us as we winged across the Kali Gandaki toward Dhaulagiri, but when we rounded Tukuche Peak to the north, the mists closed in and we obtained but a brief and incomplete view of the north face of Dhaulagiri: What we did see, flying at 18,000 feet, was awe-inspiring and even frightening. Max Eiselin urged our pilot to turn around and get out of there while we could. Back over the Kali Gandaki, we circled the village of Tukuche several times at scarcely more than roof-top height, but to our great disappointment there were no feasible landing fields to be seen. What had appeared to be level and smooth from up high turned out to be full of rocks, stone hedges and cultivated fields. In case of emergency a crash-landing could be made, but we all agreed that this was no suitable base for aerial support.

Bhairawa on the India-Nepal border was to be our staging area, since all equipment had arrived there by truck. Unfortunately it proved to be ill suited to the purpose. The heat and mosquitoes were terrible and the afternoon sandstorms almost unbearable. The Yeti's landing gear was damaged on its first setdown, but our capable mechanic Emil Wick was able to repair it within two days.

On March 29 Max Eiselin, Kurt Diemberger and Ernst Forrer went in on the first flight to Dhaulagiri. They hoped to land on the northeast col and establish our first camp there. Both Georg Hajdukiewicz and I were convinced that 18,700 feet was far too high for acclimatization purposes, but Kurt and Ernst were confident of their ability to take it. As it turned out, they changed their minds somewhat during the flight in and decided to land north of Tukuche Peak at 17,000 feet on Dapa Col, called Dambush Col by Maurice Herzog. Saxer made a perfect landing on a gentle snowfield. Kurt and Ernst were left there to acclimatize. The Yeti made

a second flight that day to unload additional supplies. In the days to follow, more men and equipment were flown in.

Bhairawa was not only a place of misery for us, but the tricky winds again damaged the Yeti—while it was tied to the ground—and caused further delay. Max finally agreed to move our operations to Pokhara near the base of Machapuchare before the men got seriously ill from the heat and the plane permanently disabled. In two commercial DC-3 flights everything was transferred to Nepal's lovely lake district.

In the meantime, the Yeti continued its flights to Dapa Col, but reports from there were far from good. Kurt and Ernst suffered so greatly from the altitude during the first few days that they could hardly move, unpack, cook or even eat. When the Yeti circled their camp on a supply flight, they could not even come out of their tent to meet the plane. After landing, the pilots shouted at the top of their lungs, but receiving no answer, they walked up to the camp and opened the tent. The two men were in their sleeping-bags, barely able to lift their heads. The lack of acclimatization was all too obvious. Nevertheless, more men were flown in.

On April 2 I went up on the second flight of the day with Michel Vaucher. Peter Diener, who had gone two days before, was in such bad shape that he was flown down again. For a few hours I felt fine and immediately broke out my cameras and started working. By now the camp was well-stocked, and Kurt and Ernst were in fair condition, having done most of the work for the unacclimatized. The weather and the sunset were exquisite, and I began to think I had been wrong. Then, despite Georg's pills, the splitting headaches and terrific thirst began. Even the Sherpas did not feel well and failed to make enough tea and soups to provide us with the three to four quarts of liquid a day one is supposed to drink at high altitudes. During the next days most of us lost everything we tried to eat or drink and spent a good part of each day in our sleeping bags with awful headaches. It was apparent that our acclimatization camp was too high. Two of our seven Sherpas, Nima Tenzing and Urkien I, caught pneumonia and had to be flown down to Pokhara.

Nevertheless, Kurt and Ernst did become acclimatized, and on April 4 the first flight was undertaken to set up Advance Base on the northeast col. Here, at 18,700 feet, the Yeti established not only a camp but a world record for high-altitude landings.

Since both of my movie cameras had been giving me trouble, and on April 5 stopped working altogether, there was nothing to do but return to Kathmandu to try to get them repaired. Max, who had a cold and backaches, in addition to the miseries of insufficient acclimatization, de-

cided to fly with me to Pokhara, where we met Peter Diener and Georg Hajdukiewicz. Georg had flown down earlier to look after his patients. Three of our Sherpas, Urkien I, Nima Tenzing, and my old friend Ang Dawa IV, were at the Pokhara Hospital. The expedition appeared a shambles.

When I got back to the Hotel Royal in Kathmandu, my wife was utterly dumbfounded but delighted to see me. After a bath (in three inches of water) and a scotch (the first thing I was able to keep down) I began to feel human again.

I sent my cameras by courier to Calcutta with instructions for their delivery to the American Consulate for repair. After nearly a week without news of them, a telegram arrived from Andy Kauffman, who happened to pass through Calcutta at the time, suggesting that I come down there myself to get things organized. On April 11 I flew to Calcutta, rescued the cameras from the Consulate where they had been "tabled" and rushed them to a photo repair shop.

On April 13 I returned to Pokhara, where Ang Dawa met me at the airport. "Bad news, Sah'b. Yeti finished!" Shortly after dawn that day an explosion occurred soon after take-off and a cylinder head blew off. Oil spattered all over the windshield, and Ernst Saxer, Emil and Adam—the latter had been flown down from Dapa Col after he lost consciousness and suffered temporary amnesia from the altitude—were barely able to land.

This seemed a nearly fatal blow to the expedition. A new engine would have to be flown in from Switzerland. What with delivery time, customs, red tape, and limited facilities for installation, the plane was going to be out of action for about a month. We had no choice but to forget the plane and revise our assault plan drastically and instantly. Saxer, Ang Dawa and I would try to reach Dapa Col via the shortest route possible, up the Kali Gandaki valley. Adam, our liaison officer M. B. Shershen and fifteen porters would bring up the remaining loads via the Mayangdi Khola, the traditional approach-march route. My group would travel light and as fast as possible.

On the morning of April 14 Saxer, Ang Dawa and I started out with four coolies. We had no radio contact with our friends on the mountain, but before we left we requested All-India Radio to broadcast periodic messages telling of the plight of our plane and recommending to the men on Dapa Col that they begin to remove the supplies from there and establish Base Camp on the Mayangdi Glacier. Meanwhile, the seven men at Advance Base on the northeast col—Ernst Forrer, Kurt Diemberger, Albin

Schelbert and four Sherpas—were to be urged not to wait for us but to prepare the route up the northeast ridge.

We began our race against time, tense but not dispirited. In the beginning it was an easy walk up a broad valley, but the heat was considerable, and both Saxer and I got blisters on our heels. We were packing sizable loads after all, and since no approach march had been foreseen, our boots were far too heavy. The people we met along the trail were marvelous. To many foreigners, the Nepalese are known as "The Smiling People." They greet you with hands folded in steeple fashion, like acolytes in a European cathedral. At night they gathered silently around our campsites. We slept mostly out in the open, and occasionally on the front porches of their small houses. The villagers are used to expeditions passing through and cheerfully provided lodging and tea. We climbed steadily, past the little half-Hindu, half-Buddhist villages with prayer flags flying and prayer wheels whirling. Once in a while we paused at a stream to take a swim. We passed files of Tibetan refugees. Often, Ang Dawa would disappear into a house and come out winking at me and asking, "Chang?" The quality of this local brew varied, very good sometimes, not so good at other times.

We would climb as high as 10,000 feet and then descend again to 4000 feet. I began to dream all day long of beer—a foaming beaker of dark, cool Löwenbräu. In the evening light we could make out the outline of Dhaulagiri and Tukuche Peak. On our right was the huge mass of Annapurna, with the ever-present cumulus cloud that boils and swirls around it. Dhaulagiri became more and more distinct. We saw the icefall of the East Dhaulagiri Glacier, steep, heavily crevassed, dangerous-looking. What seemed so white and pure and serene from a distance became menacing as we approached. That was the route, a dangerous, almost suicidal one, tried by the French in 1950.

On the morning of the sixth day we reached Tukuche, a prosperous, Tibetan-looking village. Most of the prayer-flag bedecked houses are two or three stories high, solidly constructed of stone. There must be a great need for firewood, judging from the vast quantities neatly piled on the rooftops. Each house has at least one courtyard, and some have several.

Sun Bahadur, the "boss" of the Pokhara porters, had agreed to go all the way after we had outfitted him with our spare clothing, but the others were paid off and sent back on their way. After wasting a whole day trying to round up new porters—most were scared of the mountains—we succeeded in signing up three tough looking characters to carry at least as far as snowline on the way to Dapa Col.

On the seventh night after leaving Pokhara we camped at 13,500 feet. At eleven the following morning our porters could go no farther: there was too much snow. Because our equipment was on Dapa Col, we had no shoes or warm clothing to give them. We paid them off, deposited what equipment we could not carry, and toiled up toward Dapa Col. Soon it began to snow hard, and the going got tough. Sun Bahadur, showing signs of altitude sickness and extreme fatigue, would drop in the snow every five minutes, stretch out and fall asleep. He would never have awakened without my constant prodding and friendly persuasion, yanking him to his feet to keep him alive and moving. The altitude began to fatigue all of us. At six o'clock on April 21 we finally reached Dapa Col. All our friends—Max, Michel, Peter, Jean-Jacques, Hugo, Georg, Urkien and Nima Tenzing—were there. I fell into my tent and sat for half an hour just staring in front of me. We had made it in eight days from Pokhara.

Max and the others had not received the radio messages. They had guessed that the plane was out of action but expected that Emil Wick would be able to make repairs. Now the full impact of our news hit them. The shuttle service across French Col toward Base Camp started in earnest. On April 23 Saxer volunteered to return to Pokhara to attend to the Yeti. Ernst started down with Sun Bahadur—who was still sick as a fish—and two Sherpas were sent down to bring up the loads we had abandoned earlier. Max, who wanted to expedite the plane repair, also left, expressing the conviction that we had enough ability and experience to run the show without him.

On the morning of April 24, shortly before seven A.M., Hugo, Jean-Jacques, Peter and Michel left with back-breaking loads to establish Base Camp. The rest of us followed on the 25th. The trek toward French Col was a long and arduous one, with several steep ups and downs. When we reached the 17,300-foot col around one o'clock, we added to our loads from the previously established cache. It was very cold, windy and bleak. Heavy cloud layers kept us from seeing anything but the very base of Dhaulagiri's north face. We looked down into Terray's "Unknown Valley." The Mayangdi Icefall which guards the approaches to the northeast col looked terribly broken-up, worse than the Khumbu Icefall. Soon it began to snow hard. We neared Base Camp thoroughly chilled and wet to meet a Gurkha porter and Adam Skocylas, who had left our liaison officer in charge of the fifteen porters and raced ahead to meet us here. That night we eleven slept in four small tents.

The next morning Peter and Hugo began to pick their way up the ice-fall, or rather to the extreme right of it, to establish Camp I on the way

toward the northeast col. At last the expedition was once again properly deployed. We were no longer scattered from the northeast col to Dapa Col to Pokhara to Calcutta. It still remained for some of us to carry out a shuttle service between Base Camp and Tsaurabon at timberline, where the fifteen porters of Adam's column had dumped their loads. No amount of coaxing could persuade them to go any further. There, incidentally, we found, cut in the birch trees, the seal of the 1954 Argentine expedition.

The scenery, for the few moments we could pause to enjoy it, was fantastic. Dhaulagiri's snow plume extended miles into the dark blue sky. Standing on the Mayangdi Glacier, the landscape around us seemed more threatening and dramatic than the Everest region. We looked for the grave of Roiss, the Austrian who stepped out of his tent on the northeast col and fell into a hidden crevasse.

On April 29, we made our last shuttle-run between Tsaurabon and Base Camp. About two hours below camp, we were met by two Sherpas who had been sent down from the northeast col to help us. According to a note from Peter, everything was going extremely well. Camp III had been established at 21,650 feet, and Camp IV at 23,100 feet. Some loads had been carried up to about 24,400 feet, the future site of Camp V. According to the Sherpas, everybody was in good health, although there was an acute shortage of sleeping bags, down-jackets, socks, and such important items as sugar. Many vitally needed stores were still on Dapa Col. There was nothing to do but continue the tough grind of carrying loads from there to the northeast col. And yet, by May 1 we were almost as far as the Austrian expedition of 1959 on May 28.

On May 4 I was just preparing to make another foray back to Dapa Col when suddenly I heard the low, familiar hum of the Yeti flying very high. It didn't see us because Base Camp, with its yellow tents, was hard to pick out from the yellowish rocks of the lateral moraine. We watched it proceed toward the northeast col, where it apparently landed. We saw it again flying back to Dapa Col, where we assumed it would pick up supplies and return. We were ecstatic. Everyone jumped up and down with joy. No more Dapa Col for us. Now we too at last could move up and join the others in the battle for Dhaulagiri.

The next morning as we were climbing up steeply between the icefall and threatening cliffs of the "Eiger," an impressive promontory of Dhaulagiri, we kept looking and listening for the Yeti, but it never came. For a few seconds we thought we heard a faint motor noise from the direction of Dapa Col, then nothing. We were deeply concerned.

On May 7 a jet plane suddenly appeared from the north, swooped over us at Camp I and skimmed across the northeast col in a matter of seconds. At first we thought it to be Red Chinese and that World War III had broken out without our knowledge, but then we recognized the plane as an Indian Air Force Canberra. Soon a second jet plane screamed overhead. They were obviously looking for the Yeti. Now we really worried about our pilots. That evening we established radio contact with Max Eiselin at Camp II. The signal was very weak, but he told us that he had come in on yesterday's first flight and that he was all alone there. The rest of the men where at the higher camps. As to the fate of the Yeti, he knew no more than we did.

In the late afternoon of May 8 we reached Camp II at last, after a tough day of moving up through the upper icefall with colossal loads. While the two Poles and I carried at least 60 pounds each, some of the Sherpas must have lugged as much as 100 pounds. Albin, Ernst, Kurt and the Sherpas Nawang Dorje and Nima Dorje had come down for a brief rest, after a first daring summit attempt on May 4. Here is Ernst Forrer's account of the preceding days:

"... To our horror we discovered that this was already the month of May. It wouldn't be long before the monsoon would hit us with all its might. Camp IV had been established at 23,100 feet, but we wanted to carry one more tent to the vicinity of the summit, so that we might profit from even the very briefest period of good weather. Despite heavy winds and blowing snow, our two Sherpas Nima Dorje and Nawang Dorje brought us additional equipment and supplies from below. Then they disappeared again in the heavy fog and moved down the steep ice wall to Camp III.

"During the night the storm was severe. The wind tore at the walls of our tent, while we held on to the supports with all our might in constant fear of being blown off our tiny platform. But after a frightful night, the following morning was magnificent. The thin air was clear as never before. The biting cold made us shiver. A good-weather sign. Our rucksacks were heavy, much too heavy for this altitude. And yet this morning, on May 2, we gladly carried them toward the heights above. We intended to climb up to about 24,500 feet and establish Camp V there. One tent and other gear had already been taken up.

"A short rock wall, then a lofty snow ridge, and we reached our future campsite. We discovered remains of last year's Austrian expedition: Torn tents, an ice axe and one oxygen cylinder reminded us of their battle with the mountain. Between two huge rocks we succeeded in clearing a com-

fortable campsite. The location was well protected, and we had a feeling of security. Here we were going to rest for a day to gather new strength. How wonderful it felt to relax! Albin and I were in excellent form, though Kurt suffered a bit from slight snow blindness. We dozed and dreamed about the next day.

"Some 2500 feet above us loomed the summit of Dhaulagiri, the 'White Mountain'—the goal of seven previous expeditions. We looked at it in the clear light of evening—a beautiful, lonely, immensely alluring sight. Would we be the chosen ones? At first idly, then with growing audacity, we began to speculate on a daring strike, a final dash over the last 2500 feet. In high excitement we made our decision.

"I slept well during the night, until Albin awakened me at three A.M. with a gentle poke in the ribs. The weather was clear. In cramped and careful haste we prepared ourselves. Three men in a two-man tent, putting on reindeer boots and crampons and trying to cook breakfast on a butane cooker, are anything but comfortable. Furthermore, a thick layer of frost had formed overnight on the inside of the tent, and as we shifted about, we constantly scraped our noses against it. Again and again, the icy stuff broke off in sheets and dropped on us.

"As we stood outside in the first rays of the sun, we decided to attempt the summit in a direct line across a steep snow slope. We started out, but very shortly we were breaking in up to our hips. It was a mistake; there was no chance to advance here. We had lost valuable time which we sought to make up by regaining the ridge in a tricky traverse. The weather deteriorated rapidly; Dhaulagiri was rallying against our surprise attack.

"A quick glance at the altimeter showed us we were a few feet below 25,000 feet. The climbing became difficult: we were on steep rock, affording almost no purchase, covered with a layer of fresh snow. I had always imagined the ascent of an 8000-meter peak as nothing more than a strenuous but technically easy snow climb; but here I learned differently. At last the difficult rock wall lay behind us. To safeguard our retreat, we drove in a piton and placed a fixed rope. As we continued climbing, things began to improve, and we made excellent progress up a snow ridge.

"Then the dreaded summit weather gathered and burst on us. We found ourselves enveloped in turbulent clouds and air currents. In the dim, diffused light we could make out what looked like a secondary summit. We went for it. A violent storm awaited us there. Wind-lashed ice crystals stung our faces like needles. In a matter of seconds our eyes, beards and noses were sheathed in a thin layer of ice.

"We realized there was only one thing to do: to go down. But the climb was not in vain—we had learned an important lesson. Camp V was not high enough for a successful assault on the summit. The weather on Dhaulagiri never remained favorable for more than four to six hours. We realized, as we clawed our way down, that another tent must be placed at about 25,600 feet."

On May 9 we established radio contact with our liaison officer at Base Camp and asked him to head for Dapa Col as quickly as possible, in the company of two Sherpas and the Gurkha. We talked to him at hourly intervals, but once the men had passed the crest of French Col, all communication ceased. That same day our first summit team moved up to Camp IV. The men were chafing for another attempt after their near miss. Peter, Jean-Jacques, Michel and Hugo in the meantime had occupied Camp V.

On the late afternoon of May 10, after a long day of load-carrying between Camps I and II, we suddenly heard footsteps in the snow. Ang Dawa stuck his head in the tent, pale and shaken. He said that Urkien had come racing up the glacier shouting that Nima Tenzing had fallen into a crevasse while they were on their way down to Camp I. In careless Sherpa fashion, instead of keeping a safe distance apart with a taut rope, Urkien and Nima Tenzing had walked with loops of rope in their hands. When Nima slipped, instead of falling only a few feet into the crevasse, he hurtled 50 or 60 feet down before becoming wedged, dragging Urkien to the very edge of the crevasse. Urkien had jammed in his ice axe just in time, attached the rope to it and then raced uphill to get us.

Georg, Adam and I dressed quickly. Max offered to help in spite of his lack of acclimatization, but we persuaded him to remain at Camp II. With a small tent, hot tea and Georg's medical kit, we plunged down the mountain on two ropes. In 40 minutes we reached the crevasse. This narrow gash in the snow-covered ice was no more than three feet wide at the top. When we looked down, we could not see Nima. We called. Still conscious, he mumbled an unintelligible answer. At least he was alive, though terribly cold and obviously in shock. We anchored one rope and let it down with a loop for Nima to put his foot in, but apparently he was in no condition to understand what we wanted him to do. Georg rappelled down, since he alone had brought his crampons. The going was tough. The crevasse was so narrow that he risked getting stuck at any time. At 25 feet he very nearly did and had to stop. Cautiously I moved to the edge of the crevasse and, lying on my stomach, securely held by Ang Dawa, talked to Georg. He said he could faintly make out the shape of Nima below, apparently

PLATE 11

All photos in this section except Plates 16, 17, and 18 by Norman Dyhrenfurth

DHAULAGIRI FROM SOUTH.

PLATE 12

THE YETI AT POKHARA. In the background Machapuchare (left) and Annapurna III.

PLATE 12

THE YETI AT POKHARA. In the background Machapuchare (left) and Annapurna III.

PLATE 13

FINAL RESTING PLACE OF YETI, just below Dapa Col.

PLATE 14

PACKING TO CAMP I, between icefall and ice-covered rocks of the "Ei er."

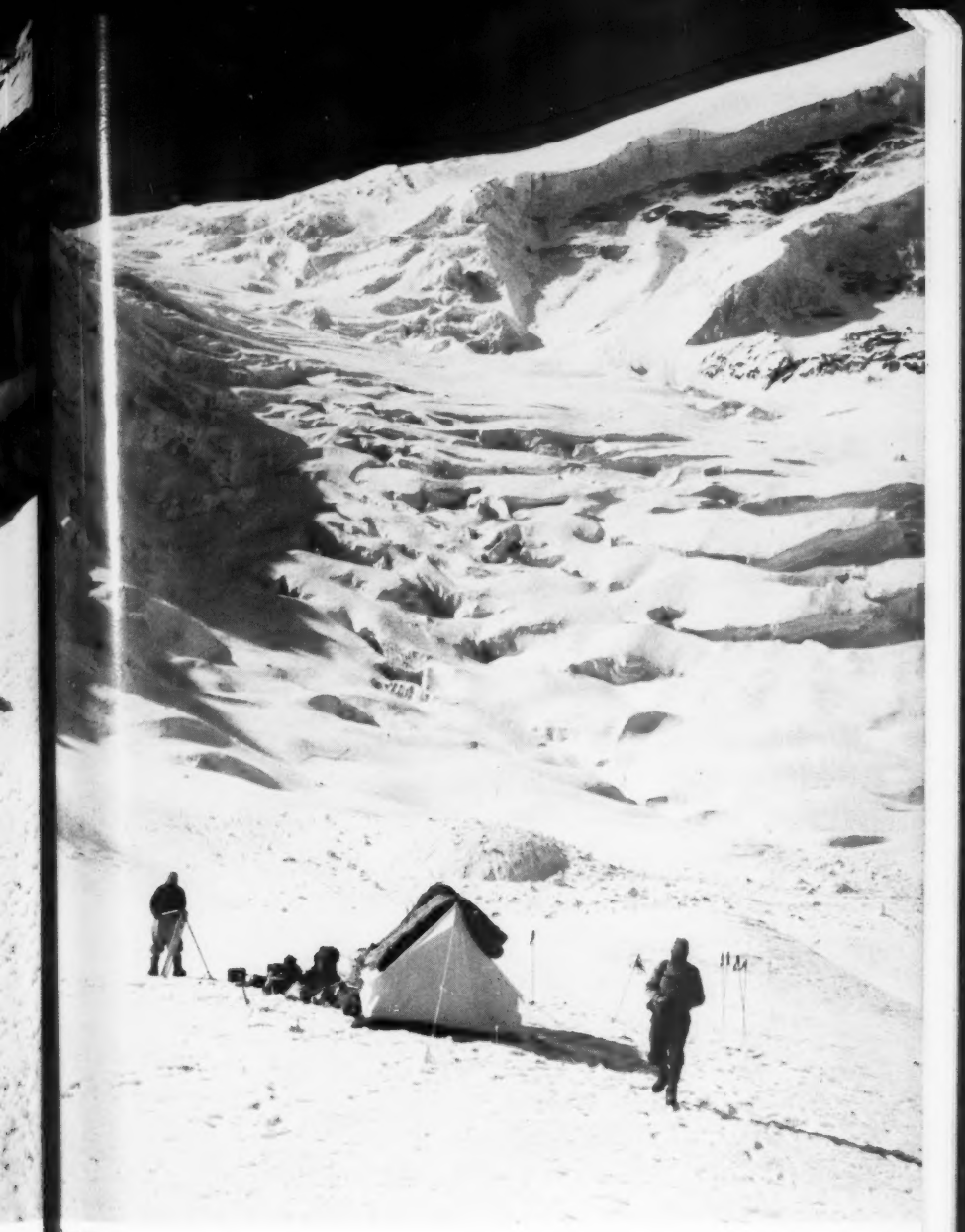


PLATE 15

CAMP I. Route through upper icefall lay close to edge of shadow. Camp II on Northeast Col at left. Route continued right along skyline.

PLATE 16

Photo by Albin Schelbert

SUMMIT RIDGE OF DHAULAGIRI.

PLATE 17

CAMP VI (25,600 feet).

PLATE 17

CAMP VI (25,600 feet).

PLATE 18

NIMA DORJI ON SUMMIT OF DHAULAGIRI, looking north to Mukut Himal.

PLATE 19

DHAULAGIRI FROM FRENCH COL.

lying face up, held in position by his breast-sling. There was nothing to do but get Georg up again. That was more easily said than done. He got no purchase on the smooth ice, and it was so narrow that his crampons were useless. We sent down a second rope with a foot-sling. But even then we had to haul him out by main force. We finally got him up to the edge of the crevasse, and no amount of pulling did any good. Ang Dawa and Urkien held my feet and lowered two-thirds of my body into the crevasse. At last I was able to get hold of Georg's right hand and pulled him out.

By this time, Nima was too cold and too near death to do anything to help himself. We tried in vain to free the rope by which he was hanging, the one Urkien had anchored with his ice axe, by attaching a second rope securely to it and pulling. The rope had cut some three feet into the edge of the crevasse and it was obvious we could not pull poor Nima out this way. I went down, chopped away at the ice and freed the rope. I placed an ice axe under it, but still we couldn't budge it. We sent the rappel rope all the way down to Nima again and shouted to him to get hold of it. This time he seemed to understand. We pulled on that rope, and he moved. Then, apparently, he lost his grip and dropped back. Finally we tried the main rope again and heaved and heaved desperately. And suddenly, it yielded. We almost fell on our faces. We dashed uphill with the rope as fast as we could, then dashed toward the crevasse and pulled again. We got Nima to the very lip of the narrow crevasse where hard pulling would risk crushing his ribs and suffocating him. He was almost a corpse, blue in the face and with shriveled hands. We had to act quickly. Georg came across unbelayed. We grabbed Nima and pulled him over the lower lip of the crevasse. We were close to exhaustion and tears, but we had saved Nima's life. Another ten minutes and he would have died. Georg gave him various injections of coramin and caffein. It was too late to move up or down that night, and so six of us crept into the small tent, Nima with all our sleeping bags on one side, and five of us on the other. Sherpas are amazingly tough people. I do not think any of us could have survived those five hours in the crevasse.

On May 12 the two Sherpas returned from Dapa Col. They and our liaison officer had discovered the wreckage of the Yeti, a few hundred feet below our old acclimatization camp. They brought a note from Ernst Saxer: "Dear friends, on May 5, at 10:15 A.M., the Yeti crashed shortly after take-off. The stick actually broke loose. Emil and I are unhurt. We waited until the morning of May 7 here on Dapa Col. We cannot possibly come down to the Mayangdi Base Camp, since Emil is in rather poor condition. Tomorrow morning, the 8th, we will descend to Tukuche, since the fuel

DHAULAGIRI FROM FRENCH COL.

and food situation here is serious. We hope to reach Pokhara on the 12th of May . . ." This, then, was the end of the Yeti. But at least our two pilots were unhurt. There was much to be grateful for.

Late that afternoon Michel, Hugo and Jean-Jacques came down to Camp II for a rest. They and Peter had been up at Camp V for several days, and when the others joined them there, things got rather crowded for nine men. It was decided that Peter, though greatly troubled by the altitude, would remain there, while three men would come down to gather new strength for a later summit attempt.

On May 13 the two Poles, two Sherpas and I carried food and equipment two-thirds of the way toward Camp III, in support of the first and second summit teams. This was our first foray up the northeast ridge, and we felt the lack of acclimatization. The weather had cleared somewhat, and I took motion pictures of the climb. There was not much wind, and even up high on the mountain conditions appeared calm. This meant to us that the great event probably was at hand.

The next day as we made our way through a snowstorm toward Camp III, we could make out directly above us four snow-shrouded figures who painfully and slowly groped their way down from Camp IV. When we reached Camp III Ernst, Albin, Peter and Nima Dorje were there, grinning broadly. They had made it!

This is Forrer's account of their day of triumph:

"The dawn of May 13 was clear and beautiful. It came none too soon for us; the night had seemed endless. We were six men squeezed into a two-man tent, a tiny shelter wedged under the overhang of a rock at 25,600 feet. Tense with the burden of our decision, we could have no thought of sleep. But when the first light of morning came, we were ready.

"At eight A.M. I roped up with Nima Dorje, and we started breaking trail. Kurt and Nawang Dorje followed close behind, and after them came Peter and Albin. Our route followed a narrow and exposed ridge. Snow conditions were treacherous, and we belayed with care. We had a lot of respect for the incredibly sheer south face on our left. There were occasional steep rock passages which required strenuous pull-ups, and we got extremely short of breath. Slowly but surely the summit moved closer. To scale an Eightthousander without oxygen is exhausting work. Our lungs labored close to bursting, and after nearly every step we needed a brief pause to pant for breath. And then, shortly before noon, we stood on the highest point of Dhaulagiri, at 26,810 feet, on the roof of the world! To the south clouds stretched in an apparently endless sea; to the north, like clouds themselves, were the countless snow peaks of Tibet and the

brown plains beyond, and quite near was Annapurna, the purgatory of Maurice Herzog . . .

"It was an extraordinary moment. After the long, long battle, here was peace. The sun was brilliant, the air calm. There was scarcely even a breeze up here—a miracle after Dhaulagiri's storms! It was hard to believe, but there we stood: six men on the summit of Dhaulagiri. Never before had so many stood on top of an Eightthousander."

Camp III was terribly cramped that day, thirteen tired and half-frozen men among two tiny, snowed-in tents backed up against an overhanging wall of ice. The weather was atrocious. After we deposited our loads, we left the second summit team with our good wishes and started across the precarious traverse toward the ridge. Peter was in bad shape. He had reached the summit only by superhuman effort. He was numb and half gone with exhaustion, and what he said did not make much sense. Ang Dawa and I roped him between us and took him down slowly, with many stops along the way. It was close to six o'clock when we reached Camp II and helped him to his tent.

Well after dark we heard Kurt's voice outside. In he came with Nawang Dorje, crusted with snow. They, too, were grinning all over. Nima and Nawang Dorje were not famous Sherpas, just young and eager. And now they had been to the summit of Dhaulagiri. Six men had made the summit so far. For the rest of us the challenge remained. Adam and Michel started up from Camp II on the 15th, but the altitude seemed to affect Adam more than the others; he climbed so slowly that we sent two Sherpas to fetch him back. He refused to come. He bivouacked out in the open halfway between us and Camp III, and the next day we watched as he resumed climbing ever more slowly. Michel, who had reached the safety of Camp III, finally had to come back down to help Adam. Still higher we could see clearly Hugo, Jean-Jacques and their two Sherpas move up the steep ice wall to Camp IV.

On the morning of the 17th we saw one dot leave Camp III and recognized Michel. Evidently Adam was not well and could move neither up nor down. He was waiting for Georg and me to go up. Through our binoculars we watched Michel toil up a 50° ice slope. His progress was painfully slow. We saw a man at Camp V looking down the northeast face of Dhaulagiri at Michel's slow advance. Obviously, Hugo and his party had not yet moved up to Camp VI, and we fervently hoped that Michel, with his tremendous will power, would catch up with them. His climb to join the men above was an amazing piece of stamina.

So now we had another team within striking distance, but also possibly a sick man alone at Camp III in rapidly deteriorating weather. Adam's condition had to be investigated. Georg and I made an attempt to reach him on the 18th, but were turned back; burdened by heavy loads, wading through fresh snow up to our knees, we decided to conserve our strength and dumped our packs. But the next day we tried again, accompanied by Ang Dawa and Nawang Dorje. Max Eiselin and Peter Diener decided to leave that morning for Pokhara.

Inwardly Georg and I hoped that, with luck, Adam would be all right and we would be able to make our own summit bid. Dhaulagiri on that day, however, was a mass of swirling snow and plumes that blew out for miles into the sky. Never had we seen the mountain so completely terrifying. The wind tore at us as we fought our way upward. Georg and I took turns breaking trail. Then we tired and sent the Sherpas ahead, but we had a hard time keeping up with them. Our feet congealed until they felt like paralyzed lumps of ice, and I grew really worried that we might end up with amputations like Lambert and Schneider. Incongruously, all I could think of was that this would mean no more tennis for me. The idea of tennis was idiotic, but it is the kind of thing one thinks of in these circumstances. It was a terrible ordeal, that climb. Our sun glasses filled with snow every few minutes. We had almost reached a point of desperation when our Sherpas suddenly appeared out of the storm to help us. Having deposited their loads at Camp III, they made the tricky and exposed traverse back to our side and now relieved us of our loads. As soon as we reached the camp, Ang Dawa took off our reindeer boots and started to massage our feet. At first they seemed utterly lifeless and white, but the long and steady massage gradually restored their circulation.

We shared one of the two small tents with Adam that night. He seemed all right, though weak. He had been up here for four days alone. Despite sleeping pills, we slept very little.

The next day the storm gathered strength, and waves of flying snow threatened to crush the flimsy shelter. We thought of those above and prayed the storm would not sweep them down. At dawn, after another bad night, the snowdrift, solid as ice, had reached the very top of our tent. I could not shake it off, nor were we able to get out of the tent. Ang Dawa came to the rescue and started shoveling. In the heavy wind and snow it must have been hell for him.

Then, without warning, we ran out of butane gas. That was it. There could be no question of going higher without gas for cooking. At seven A.M. I fought my way outside, but it was blowing so hard that our chances

of making the traverse toward the ridge were zero. And yet, we had to go down if Adam was to survive. By nine o'clock conditions improved slightly, and we started our melancholy trip down, leaving two emergency oxygen bottles behind for the second summit team to use on its way down. Adam behaved strangely, like a sleep-walker, and had to be watched every step of the way. On the steep ice face, the storm doubled the danger. We had to drive our axes in and hold on for dear life. Sometimes the gusts of wind were so fierce that they almost tore us off the ridge altogether. Poor Ang Dawa carried my big movie tripod on top of a huge pack, a heavy and awkward load. I went last, as anchor-man, with Georg in the lead. I noticed Nawang Dorje was getting tired, weaving from side to side like a drunk. Adam kept falling time and again. Once Georg started a snow-slide, but we jammed in our axes and stopped his fall. We reached Camp II at last in the early afternoon. It was the end of our try for the summit. After weeks of incessant effort, we knew now we would not get another chance.

Two days later, on May 22, two exhausted Sherpas stumbled into our camp shortly before dark. Throughout all the storms of the past days and nights they had shared the two tents at Camp V with Hugo, Jean-Jacques and Michel. Now their food had almost run out, and the Sherpas were sent back down. Incredibly enough, the three sahibs still hoped to make a try for the summit.

On the 24th, long after dark, around nine P.M., I was lying in our tent, ready to go to sleep, when I heard voices. In the light of my flash-light Georg and I saw Hugo, Michel and Jean-Jacques coming toward us, weaving from exhaustion, their beards and faces crusted with ice. "How did it go?" we cried. Hugo answered: "O.K., we made it." "Terrific!" we exclaimed, "Who?" Hugo hesitated. "Michel et moi," he said. Quickly we pulled them into our tent, took off their wet clothing, and made them comfortable. Over plenty of hot drink and food, they told us their story. Jean-Jacques, poor fellow, had lost his ice axe. One of the Sherpas had taken it down with him. It was too risky to climb without one, and so, almost at the goal, he had to stay behind. But Hugo and Michel had made the summit all the way from Camp V at 24,400 feet, reaching the top at 6:30 in the evening! A climb of 2400 vertical feet to the summit and back to Camp VI in the gathering darkness, with careful belays along the exposed summit ridge! It was a stupendous achievement, perhaps one of the most remarkable in Himalayan mountaineering!

Now our expedition was truly a success. In spite of initial setbacks, the challenge of Dhaulagiri had been met in a way that left no doubt that the

"unclimbable fiend" could be climbed. Much credit for this success must go to the pioneering work of the ill-fated Austrian expedition of 1959. Their fixed ropes in the ice-covered rock wall above Camp IV saved our men much time and effort.

Now there was only the long way back down the Mayangdi Icefall, the wait for 35 porters at Base Camp—they reached us there on May 29, led by M. B. Shershen—and the all too well-known trek across French Col and Dapa Col down to Tukuche, where we arrived on June 1. The hike back to Pokhara was sheer pleasure, quite different from our desperate race after the Yeti's first failure. On June 8 we were all safely back in Kathmandu.

The snows of Dhaulagiri have been left far behind, but they can never be forgotten.

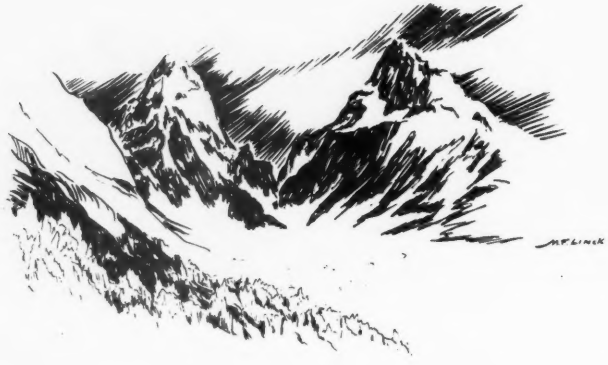
Summary of Statistics

AREA: Dhaulagiri Himal, Nepal.

ASCENT: Dhaulagiri, 26,810 feet, May 13, 1960 (Ernst Forrer, Albin Schelbert, Peter Diener, Kurt Diemberger, Nima Dorje, Nawang Dorje)—first ascent; May 23 (Hugo Weber, Michel Vaucher).

Two peaks northeast and southwest of Dapa Col, both 19,000 feet, early April, first ascents.

PERSONNEL: Max Eiselin (leader), Ernst Forrer, Jean-Jacques Roussi, Albin Schelbert, Michel Vaucher, Hugo Weber, Ernst Saxer (pilot), Emil Wick (co-pilot and mechanic), Swiss; Kurt Diemberger, Austrian; Peter Diener, German; Dr. Georg Hajdukiewicz, Adam Skocylas, Polish; Norman Dyhrenfurth, American.



North of Dhaulagiri

JOHN S. HUMPHREYS

So DHAULAGIRI has finally been climbed, and of the seventeen 26,000ers in the vast arc of the Karakoram and Great Himalaya the number of untouched summits has been reduced to two. As the four of us sat on a high ridge corner in late fall of 1959, under a dry and sparkling sky, and watched the screaming wind tear a majestic snow plume from the entire breadth and height of Dhaulagiri's frozen northern side, we had cause to wonder. To wonder at the force of will and system of values that could possibly drive men to 26,000 feet under such conditions, but also to wonder at the certainty felt by each of us that this would be done and the summit would be reached before long. We were mountaineers, and on a climbing expedition, but in a different sense from the grand, harsh and final struggles for the highest levels. The past ten years have seen such a rush of the latter that perhaps some words of explanation are needed to describe our feeling that it was completely satisfactory and worthwhile to travel half around the globe and then to spend 90 per cent of our time walking and never climb over 22,000 feet. Reiteration might be a better word, for these ideas are not new, and will persist when those who seek and find the utmost borders of human experience have turned their imaginations and others' pocketbooks to the mountains of the moon.

The lure of the unknown is forever powerful, but unless it can be expressed in human terms, it must remain sterile and useless as well. Usefulness here is meant on a personal level, though there is also present a certain sense of obligation to learn, and subsequently to add one's knowledge to the general store. To us the greatest fulfillment in the realm of mountaineering comes in dealing with an unknown, but knowable, geographical situation while in full possession of one's physical and mental faculties; able to react to fellow climbers in an essentially normal way, with the chosen location one of interesting culture and surpassing grandeur. The effect is tremendously enhanced if the members of the group are few and are good friends at the start and if the plans are fluid enough to allow for diversions of interest as they occur. This implies a relatively lightweight (and hence low cost) expedition with a general objective rather

than a specific one, and with no intention of pushing beyond the point where experience can be enjoyed in the present tense. To do this with a minimum of pressure and clutter, in a social environment as varied and colorful as that of the Tibetan hill people, is truly to escape for a time into an exalted version of life.

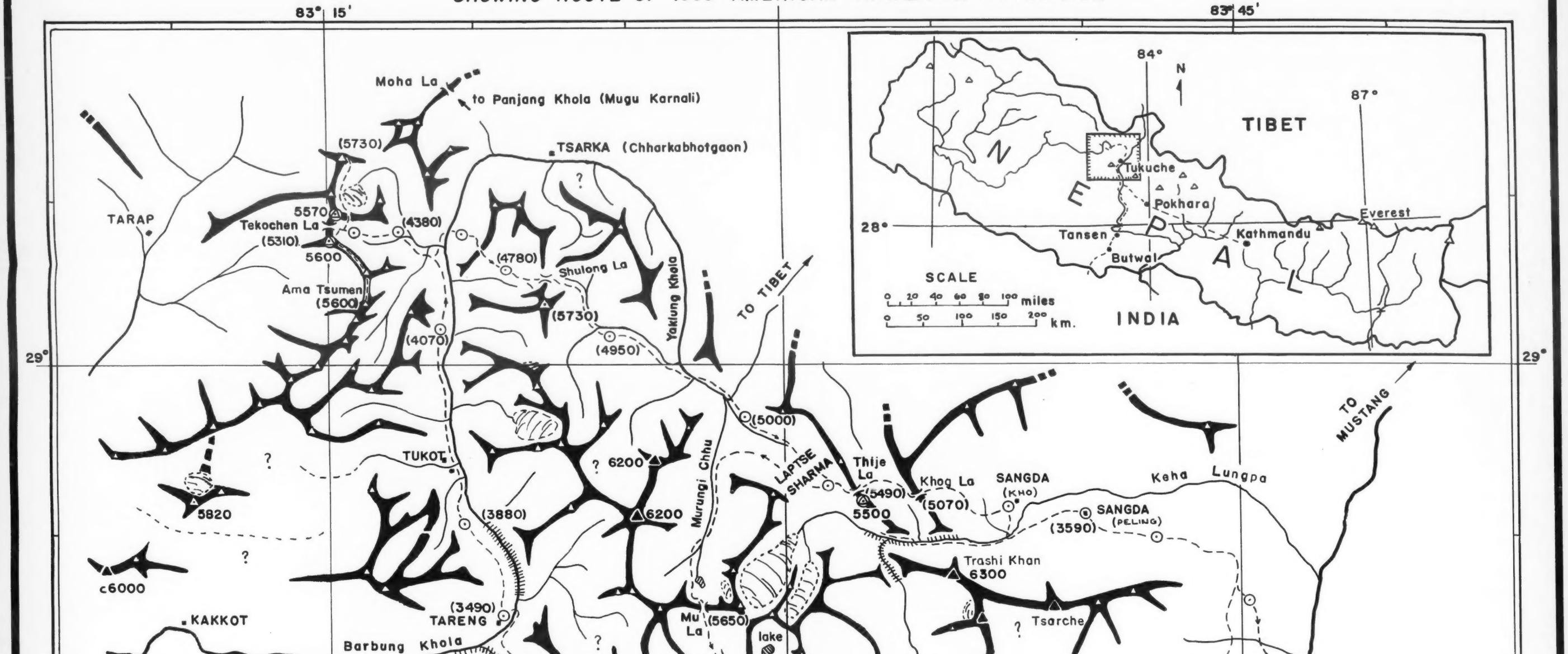
This was then to be an expedition inspired by the tradition of Shipton and Tilman, of Murray and Weir, and of Herbert Tichy. There were a fair number of climbers, friends from Harvard Mountaineering Club days, who I knew actively believed in this philosophy, having experienced the satisfaction of applying it on trips in the past. To collect firm commitments for definite plans, however, was something else again. The period between application for permission and arrival in India fourteen months later saw what I have come to think must be the usual amount of crisis correspondence and last minute luck. It worked, somehow; and by mid-August of 1959 John Noxon had wangled a term's leave from research duties at the University of Saskatchewan, Fred Dunn had completed a tour of duty with the U. S. Public Health Service and was eager for a trip before starting new studies, Casper Cronk had talked the U. S. Army into dispensing with his valuable services for another six months, and I had just finished my Ph.D. thesis, and hence my overlong student career. John, Fred and I had climbed together in Alaska and in the Karakoram, while Casey had been high in Peru, so we all had some knowledge of the discomforts of altitude, but none had seen Nepal before. Our mean age was 28 years.

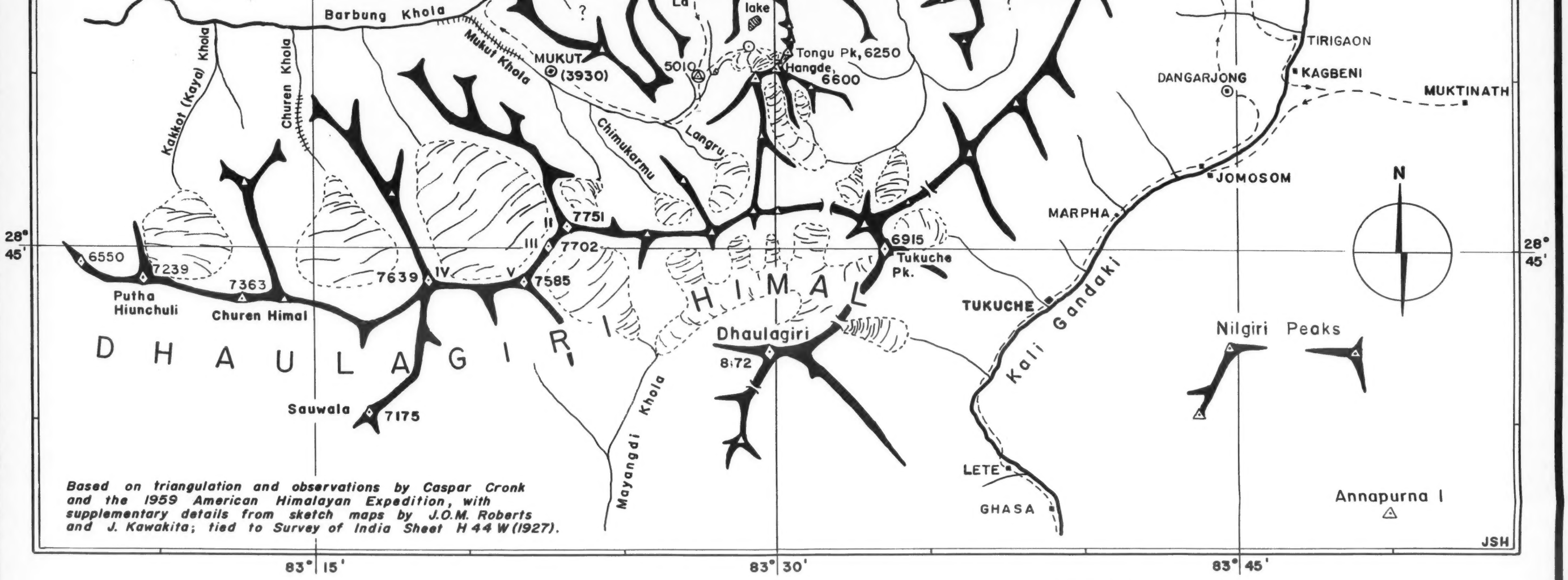
The country had to be Nepal, from my point of view, for two reasons. Three of us had been to the Karakoram in 1955, finding in the process most of the smaller peaks incredibly spectacular but discouragingly unclimbable, and main interests lay in a new environment. Secondly, entry into any of the other areas of mountaineering appeal in the Eastern world (Pamirs, Garhwal, Sikkim, Bhutan) is for an American party close to a diplomatic impossibility. Exactly which area within Nepal to go to was a much less fundamental choice, since from the start we did not contemplate tackling anything higher than 23,000 feet. The country east of Kathmandu, towards Everest, seemed to have received and be receiving an inordinate amount of attention, from hunters both of peaks and of yetis, so we looked to the west. Immediately the eye was struck by the vast mountain area to the north and west of the Dhaulagiri massif, which is so remote from the mechanized world that until the installation of an airstrip at Pokhara in 1953 it was virtually inaccessible. Add to this an idyllic impression of cloudless skies and varied, colorful, majestic scenery from a set of October Kodachromes taken by Bob and Gail Bates just south of the Annapurna group, and the choice was made.

SKETCH MAP OF MUKUT HIMAL AND ENVIRONS

WESTERN CENTRAL NEPAL

SHOWING ROUTE OF 1959 AMERICAN HIMALAYAN EXPEDITION





Based on triangulation and observations by Caspar Cronk and the 1959 American Himalayan Expedition, with supplementary details from sketch maps by J.O.M. Roberts and J. Kawakita; tied to Survey of India Sheet H 44 W (1927).

SCALE 1 : 200,000

0 5 10 Statute Miles

0 5 10 15 Kilometers

ALL ALTITUDES ARE IN METERS

1960 Magnetic Declination 0° 35' Westerly, Annual Change 0° 01' W

LEGEND

- Surveyed peak; height and location from Survey of India . . ◇
- Peak triangulated by 1959 A.H.E.; height ±50 m. . . . . △
- Peak determined from 1959 A.H.E. photos; height ±100 m. . . . ▲
- Altitude determined by triangulation 6600
- Altitude determined by corrected aneroid, ±50 to 100 m. . . . (5340)
- Survey station . . . . . ◬
- Campsite . . . . . ⊙
- 1959 A.H.E. route . . . . . ~~~
- Topography uncertain . . . ?
- Steep gorge . . . . . ≋
- Village . . . . . ▪
- Pass . . . . . ⌒
- Glacier . . . . . ≋

This work was partly supported by the Gilkey Research Fund of the American Alpine Club

Specifically, we set out to get as close as we could to the Kanjiroba Himal, a rather vaguely defined group of peaks rising to about 23,000 feet some 20 miles south of the Tibet border and 50 miles northwest of Dhaulagiri itself. This meant a walk of at least three weeks up through the great gap between Annapurna and Dhaulagiri, and then around the whole Dhaulagiri group on the northern side, through a region called the Mukut Himal. It would be wrong to call this area unexplored. Since 1953, three parties had traveled west of the Mukut Himal, but none had done any real mapping or much climbing there, because their main energies were directed elsewhere. Herbert Tichy, alone with four Sherpas, was engaged in crossing the whole of Western Nepal in 1953, and it was his book, *Land der namlosen Berge* (Ullstein, 1954), that gave us the first fine detail, the first real tinge of excitement over the bleak Tibetan character of these high valleys. Roberts and Lorimer in 1954 were concerned primarily with the northern side of the Dhaulagiri massif, which proved extremely difficult of access; they were successful in reaching the top of Putha Hiunchuli (23,750 feet), as well as two lower Mukut summits. Colonel Roberts' sketch map of the peaks surrounding the village of Mukutagaon was very helpful to us in orienting ourselves later on. Finally, a primarily scientific Japanese party led by Jiro Kawakita was active in the fall of 1958, walking far around to the north of the Kanjiroba group, but again access was difficult, and ascents were limited to the Mukut Himal. (See *A.A.J.*, 1960, 12:1, pp. 66-7.) I was not aware of the latter trip until I had a very rewarding correspondence with J.O.M. Roberts in Kathmandu, but I later arranged to meet Prof. Kawakita in Tokyo on the way out, receiving thereby many valuable details and letters of introduction. The advice of these two men saved us many hours of worry and trouble, and we are all deeply grateful to them both.

Word of permission filtered through in November, 1958, five months after the application had been sent in, having been immeasurably helped along by both the official endorsement of the American Alpine Club and the efforts of Douglas Heck, first as First Secretary of the American Embassy in New Delhi and later as Chargé d'Affaires in Kathmandu. Finances were scraped together for the most part privately by expedition members, with some welcome help from a few individuals and a loan from the AAC Expeditions Fund. By late June, 1959, all goods were bought and ready for shipment, and we were committed; but it was August before I was really sure that we would have enough cash and that Casey Cronk would even be with us at all.

It was particularly important that Cronk join us, for one of the few really constructive things we intended to do was some detailed mapping,

and he had the needed experience. As a geologist-glaciologist he had spent more than a year at Wilkes Station, Antarctica, surveying under the most adverse conditions. Casey managed to get for us a beautiful little four-pound Kern theodolite, and he set up a limited scientific program of mapping and geological collection, which was supported in part by a small grant from the Gilkey Research Fund of the American Alpine Club. His strong side interest in folklore was the cause of some apprehension, for he threatened to arrive in New Delhi laden with tape recorder and masses of tape. In fact he did, and I grudgingly added yet another porter to my ever expanding mental caravan; but we lived to be delighted with the results, forgetting all objections.

Fred Dunn, our medicine man, is by trade an epidemiologist, and he became considerably interested in the possibility of making a general medical survey of several of the high Bhotia villages through which we were to pass. These are social units which have a distinct way of life under difficult conditions, and which are almost entirely cut off from outside influence, so their public health status is of academic interest. Fred was also custodian of a casual commission to "pluck a few scraps off the crags"; more specifically to incarcerate and bring home any plants we could find that had the temerity to survive at altitudes of over 17,000 feet. Thus there were several items that could be listed under "Science."

On August 19, at last, as I flew with the sun, and the plains beneath gave way to forest, mountains, and then the endless sea, I began a journal that was to carry through 128 days, at least 300 miles on foot, and a vast and fascinating jumble of experience. To give here a few glimpses of this separate world is all I can hope to do. . . .

September 13, Kathmandu

It is Sunday, but Saturday is the day of rest in Nepal, so the bank is open and everything is in full swing. I must return again with Manik Tuladhar to the government palace this afternoon to visit Shardul Shumsher Jung Bahadur Rana, the young-looking official (most officials here are young-looking) who oversees expedition affairs. We are required to take along a "Government Liaison Officer," and I expected to find on my arrival some specific man assigned to us, but three days have passed and no name has been produced. Manik is the lad who came up to me on the street yesterday, started talking fair English in a friendly way, and then asked to come along. I treated this idea with some skepticism, but told him he could only possibly do so as our L.O. (Liaison Officer). Far from discouraging him, this statement made him decide to *become* our L.O.!

He is only 19, but many are the byways of influence in Eastern officialdom; it seems he may actually pull it off.

A week ago the four of us finally got together for literally the first time in New Delhi, after I had spent about eight days fussing (there is no better word) with Bombay Customs, freight agents, etc. The arguments seemed endless, yet I was assured that our goods were getting through in about half the time that is often required. More customs fuss in New Delhi, more of the many holidays on which nothing can be done, and then I came on ahead to Kathmandu for final arrangements with His Majesty's Government. Presently the other three are rattling through the North Indian hinterland on a train, headed for the border town of Nautanwa and a rendezvous.

Not only do they hope, with fingers crossed, to see our precious crates there, but also this is to be the meeting with our four Sherpa porters, arranged for months ago by remote control. In this instance our remote control has been the presence here of J. O. M. Roberts, whose knowledge of the area and of the Sherpas is unsurpassed. Other groups are having trouble with the division between Darjeeling Sherpas under Tensing and the Himalayan Society in Kathmandu, which, with government support, requires all expeditions to deal with it for high porters. Thanks to Roberts, however, I have had nothing but smiles, and we are well set with good men.

The weather is still moderately bad, quite normal for this time of year. In fact on Roberts' suggestion we are not counting on the Pokhara airstrip at all on the way in, since during the monsoon it often resembles a swamp. Instead, I will return to India and join the others by train, then find a truck to take us across the border to Butwal. We will walk from Butwal across the Siwalik hills and up the great gorge of the Kali Gandaki, the route taken by Herzog and his Annapurna party in 1950. It is lucky our plans do not depend on the plane, for operations of the Royal Nepal Airlines (all three aircraft) are indefinitely suspended at present. Reasons are unclear; something to do with nationalization; the best explanation the Times of India could come up with was "internal confusion."

October 6, Tukuche

Sprawled in the carpeted bedroom of Takoor Prasad, a cousin of one of the Subbhas (Big Men) of Tukuche, we hurriedly scribble what will probably be the last letters to the outer world for the next two months. This is the center of the Thakali tribe and a sizeable trading town, which we reached three days ago after two weeks of tramping with our 48 porters through the hot, humid lower valleys. Driving rain is turning the track

outside into a sea of mud, in what we can only hope is the last gasp of the monsoon. We are directly under Dhaulagiri, but have not yet seen more than a few glimpses of its vast lower walls. As a reminder that the season is indeed advancing, we were treated yesterday to the awesome sight of hundreds upon hundreds of wild geese streaming south out of Tibet in great V-formations, high above the valley floor. For a stretch of 150 miles along the chain of the Great Himalaya the narrow slice of the Kali Gandaki is the only gap which falls below 16,000 feet; so it is much used by both birds and traders, accounting for the high relative prosperity of the Thakali people.

By some miracle, everything and everyone arrived intact and on schedule at the Nautanwa railhead to start off the trip in. By the time I arrived with Manik in tow, the others had cleared everything with the customs officer, and were valiantly trying to get used to being waited on by our four Sherpas: Ang Dawa (Sirdar), Chhotare, Phurkipa, and Ang Norbu. I threw some sand in the gears at this point with the discovery that I had left a coat containing my passport on a cross-country train 50 miles to the south, but with a display of efficiency that would be remarkable anywhere and was incredible in India, calls were made down the line, the coat was found, and I was able to retrieve it next day (complete with passport).

Two days ago we had our final dealings with Rana Bahadur Rana, the proud, unsmiling little coolie contractor who did all the bargaining and provided all the men to carry our loads. His relative lack of stature in the large and aristocratic Rana clan is partially compensated for by using the name twice. Though he carried no load he was worth his pay, for once the initial six-hour bargaining session in Butwal was over, he stuck by the agreed rates and stages and kept the coolies moving with virtually no complaints that reached our ears. The men received per day six Nepali rupees (with no return pay), which can be bought for 79 cents in Kathmandu, though outside the metropolis the Indian-Nepali exchange rate is a matter for negotiation, and there are still those who will accept only silver coin (1000 rupees weighs 26 pounds). One of the items of recent argument with RBR was how much to make up the loss of one of the coolies who absentmindedly fell off a rather bouncy cantilever bridge into the Kali Gandaki two days back down the line. He was lucky to survive; his load was somehow retrieved, but all his belongings and cash parted company. In the end we paid half his loss.

The many days of tramping through the constant steam heat of the foothills were not entirely joyful, but this was a new world to each of us, at times staggeringly dramatic and always immensely varied. We generally

found a roof to sleep under, since rain was common and it is very difficult to find tent platforms in precipitous rice paddy country. By far the most fantastic of these abodes occurred early on, when we dropped down 3000 feet from a ridge through a jungly gorge to the banks of the Kali Gandaki for the first time. Here, amid a few dirty huts, we found ourselves in sole possession of an abandoned Rana palace, an enormous, decaying Victorian structure, complete with colonnades and many large rooms containing nothing but bat dung. We camped on an upstairs balcony, and nothing later quite equalled the evil, mouldy grandeur of that night.

Fred is still poking at a lump on his shin; a scrape which became inflamed a week ago on the march, and then gave us a good scare by turning into a general bloodstream infection. After the worst night on record at Dana, on the porch of what sounded like the local TB ward, Fred was flattened literally in the middle of the trail by this bug. The next four hours were anxious ones, with fever running up to 104.5°, while large doses of antibiotics took over the struggle. Such are the miracles of modern science that in less than 24 hours Fred was on his feet and able to keep up with the rest in what proved to be a long, tiring day. He has his fingers crossed that this will not kick up again during the next few days. Mules and ponies have been ordered for tomorrow to take our loads from the present 8000-foot level high into the hills at last. Our route will take us west out of the Kali valley, over three high passes, and from there into we don't know just what. So much depends on the weather, and on whether what is shown on existing maps is actually there.

Both Cronk's expensive little Nagra tape recorder and my Polaroid camera have been seeing extensive use here. Subbha Shankerman, whose guest we are, arranged a lengthy songfest for Casey with a group of Tibetan hill people, and I have been taking VIP shots right and left (VIP in down jacket, VIP with wife, VIP with kiddies . . .), trying to spread the honors around. Since there are strong local rivalries, and we are depending on these men for our supplies, this becomes a matter of some delicacy.

October 21, Mukut Base Camp

As the warm snow swirls down, and I loaf alone in our monster base-camp tent, I can guess at the discouraged thoughts of the other three, perched 3000 feet above in a two-man tent, on a col just under the 20,000 foot level. They are in an excellent position, attained as a result of four days of route finding and load carrying effort, from which to attempt the first ascent of a fine peak which looks to be the highest in the Mukut Himal. But our weather, almost uniformly good since leaving

Tukuche, has finally broken, and prospects seem poor. This peak, Hangde, rises to about 22,000 feet and proved too much of a temptation to resist, though we originally planned to go further west before stopping to climb. A clear route presented itself in the form of a long moraine ridge, a smooth, nearly unbroken expanse of glacier, a short avalanche chute, and then several hundred feet of rather placid icefall to the col. From here, access to the long summit ridge seemed easy. Fred, John and I marked a route through this icefall three days ago, and then trudged on to the top of a smaller snow dome just north of the col. While doing this, at perhaps 20,000 feet, we were highly startled to see a Tibetan crow (tongu) glide up the updraft on one side, give us the eye, and disappear rapidly over the other side, so this promptly became Tongu Peak.

I had not been acclimatizing well, and felt particularly exhausted and gaspy during that Tongu Peak day. The reason for a significant part of this became clear later that evening, when the early but unmistakable symptoms of pneumonia displaced sleep by chills, panting and then pain as I lay in the sack. Fred, when aroused, promptly pumped an astronomical quantity of penicillin into me by wielding the needle four separate times, but I was in no mood to object. By morning all discomfort was essentially gone, but all higher activity was out for me for awhile. I would not have been up to it even had Fred approved, so I descended from this intermediate camp while the others carried a camp to the col with Sherpa help.

The walk from Tukuche a week ago was everything we could have expected or hoped for. As the mules were gathering, the skies cleared, and remained so as we strolled up the open, flat valley of the Kali Gandaki towards Tibet. Then a sharp turn to the west, a rapid climb to 14,000 feet with more and more high snow peaks opening out to view, and a stop after four days to change transport again. Mules cannot handle the cold or the snow of the high passes, and so at Sangda we waited a day, a welcome day, while sufficient yaks could be rounded up. This is a truly Tibetan village, only ten miles or so from the border, and Fred took the opportunity to pass out pills, feel necks, listen to hearts and ask questions. Most of this had to go through three languages, since Manik speaks no Tibetan, and this produced some amusing tapes. The village men were wonderful specimens, each a character, strung about with knives, turquoise bangles, heavy felt hats and/or braids, with one arm in and one out of their shaggy sheepskin coats.

Four of them, with 21 yaks (each carrying 120 pounds), then took us in two days over the Khog La (16,600 feet), the Thije La (18,000 feet) and the Mu La (18,500 feet) to our present Base Camp; two days of

major effort, though the yaks expressed total unconcern. The intermediate night was spent on a remarkable open plateau at 17,000 feet called the Laptse Sharma, and the next morning our "scientific program" was begun, with theodolite observations from a baseline, and a hurried attack by Fred on everything botanical within a hundred yards that could be dug up or chipped off.

The surveying activity will continue here, before we push on to the west, as soon as the weather clears and the others return from their climb. We have a magnificent view of Dhaulagiri II (25,429 feet) just five miles to the south to act as a control point for this work. A small party of Japanese climbers sponsored by Keio University are based at the village of Mukutgaon, one day's march down the valley, trying to find a route onto Dhaulagiri II for a proposed future attempt. The virtually unbroken northern aspect presented by this major peak does not suggest that they will find this an easy task. (See *A.A.J.*, 1960, 12:1, pp. 67-68.)

November 2, Camp near Tekochen La

This bleak, dry spot at 17,000 feet just under a little-used pass is as far to the west as we will camp, and that only for two nights, while a baseline is set up, a few peaks are climbed, and observations from three survey stations are completed. We are just on the eastern fringe of what might be called the Kanjiroba Himal, though the main summits of this group are a good twenty miles further west and now well out of range for us, based on remaining time and money. It has been somewhat disappointing to discover that nothing in our immediate vicinity seems to rise higher than 19,000 feet, since the Survey of India sheet suggests an extensive area all over 20,000, but then, this is the sort of finding that we are here to make. The superb weather that we have enjoyed for eight days since leaving Mukutgaon is showing some signs of deterioration, but it has done this before and then surprised us by clearing off beautifully again without a trace of precipitation.

Unfortunately, the storm back in the Mukut Himal thwarted Fred, John and Casey in their attempt on Hangde with new snow, very poor visibility and heavy cornice formations dictating a retreat about 200 feet from the top. After a second stormy night at the col, they carefully rubbed the Tibetan good-luck charms we had all acquired in Tukuche and started wallowing down the icefall, whereupon the mists parted and the route lay revealed. Several days later, with a group of rather obstreperous yaks brought up from Mukutgaon, we were all together again and headed down into the Barbung Khola, a completely different watershed from the Kali

Gandaki. One yak saw fit to shake a five-gallon can of kerosene loose from its back at a spot where the trail was about six inches wide, and the can was totally demolished as it bounced 1000 feet or so down the mountainside. This seemed a significant catastrophe to us at the time.

After a pleasant meeting with the Japanese party, who happened to be all together at their base of operations as we passed through Mukutgaon, we progressed north up the Barbung Khola, perforce adjusting our pace to that of our yak train. The approximately one mile-per-hour gait of a group of yaks seems to be one of the immutable constants of nature, and while this can seem quite fast enough to unacclimatized lungs panting uphill at 18,000 feet, it is trying indeed to be forced to cover mile after mile of relatively level going at this rate. These effects are compounded by the fact that in order to find sufficient foraging the beasts must be turned completely loose at night. They may climb several thousand feet and roam for miles, and rounding them up come the dawn is no small task. On one occasion this process took more than ten hours, and we sat in one spot for an unwanted rest day. Starts before eleven A.M. were rare, and a five-hour working day was a good one. Our concept of the distance that could be traveled in our given time underwent considerable revision at this stage.

The trek up this valley was of interest in its own right for three reasons: fossils, Tibetan refugees, and several nearly deserted villages. Cronk has been making geological notes all along, but it is the discovery of several fine fossil shells at scattered spots, and of a rich site near the village of Tarengaon, that has given him the greatest scientific satisfaction so far. No paleontologist himself, he looks to future identification of these finds to provide some sort of basis for accurate dating of the incredibly torn and twisted local strata. At several points we passed, and one evening we camped beside, one of the sprawling yak-hair tents called yurts that are home to the nomadic Tibetans. These men each own sizable flocks of sheep and yaks, and many would normally migrate south into Nepal with the winter season. This year, however, due to pressure from the "People's Liberation Army," they are not planning to return again to Tibet. Charming, self-sufficient, they do not fit one's mental picture of refugees, but such in fact they are. Finally, it seems evident to us that this whole area north of the main Dhaulagiri Himal is slowly getting drier. This is the only reasonable explanation for the two almost dead villages that we passed, with terraced fields bare and houses crumbling. The rain shadow effect of the southern monster peaks makes this a dry area anyway, with irrigation necessary for any cultivation at all, but irrigation must have a source, and for these people it had apparently withered away. The lack of

ATE 20

All photos in this section except Plate 24 by John Noxon

MEMBER OF THE LAMA'S ENTOURAGE ON LAPTSE SHARMA.

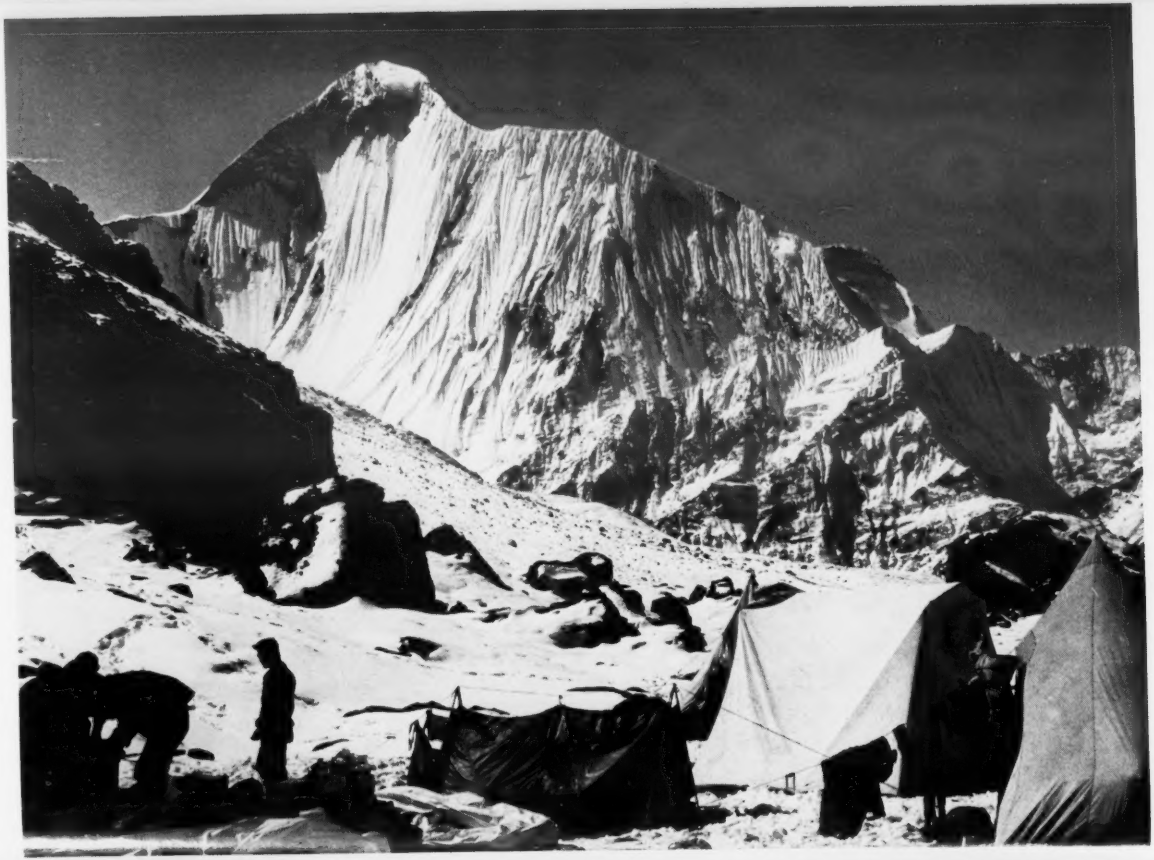


PLATE 21

DHAULAGIRI II from Mukut Base Camp.

PLATE 21

DHAULAGIRI II from Mukut Base Camp.

PLATE 22

HANGDE from summit of Tongu Peak.

PLATE 23

CRONK SURVEYING FROM PEAK NORTH OF TEKOCHEN PASS. Dhaulagiri I to right.

CRONK SURVEYING FROM PEAK NORTH OF TEKOCHEN PASS. Dhaulagiri I to right.

PLATE 24

Photo by Caspar Cronk

TELEPHOTO OF KANJIROBA HIMAL PEAKS from ridge near Shilong La. Tekochen Peak in center foreground.

PLATE 25

THE LAMA AT LAPTSE SHARMA.

PLATE 25

THE LAMA AT LAPTSE SHARMA.

PLATE 26

LOADING A YAK AT MUKUT BASE CAMP.

PLATE 27

A LOCAL YOUNG MAN ON THE BARBUNG KHOLA ROAD.

local precipitation is also shown by the complete absence of any glaciers at all in the vicinity of our present camp. The one glacier we encountered in the Mukut Himal seemed essentially dead. This, coupled with the superb weather we are enjoying, explains the remarkable statement that in nearly one month's living close to high peaks we have not seen or heard a single avalanche of any description.

Further down this side valley leading to the Tekochen La, we have established a second Base Camp for a period of ten days or so. Prompted by the slowness of yak travel, the state of our pocketbooks, and the necessity of returning over at least three high passes before winter sets in, we were forced to the conclusion that to attempt to reach the heart of the Kanjiroba Himal is not practical. Mitigating this disappointment to a considerable extent was the superb view into this new country which we had yesterday when we climbed to the pass itself, and thence to the summit of a small neighboring peak, "Tekochen Peak." On the northwestern horizon, and clearly at least a week's travel away, stands a significant group of peaks, rising to more than 22,000 feet in several places. If the Survey of India figures are correct, the highest of this Kanjiroba group is just over 7000 meters (7043), a number that we will not be able to check with any accuracy, but which places this as the highest point in the 200 mile stretch from the Dhaulagiri Himal to Api on the far western border. Other, smaller, unidentified mountain groups rise sharply against the clear Tibetan sky further north, while in the south the scene is dominated by the vast bulk of the Dhaulagiri Himal, only 15 miles away. Further east, Annapurna can be seen over the heads of the Mukut Himal. Altogether, the top of "Tekochen Peak" is an amazingly good spot for a survey station, since getting there involves only a bit of rock scrambling. The next few days will be spent occupying this and two other stations, and doing some more sightseeing along ridges in the immediate vicinity.

Manik Tuladhar is up here with us to feel what it is like to sleep in a "high camp." He is off by himself in a little, lightweight Swedish tent, and the nights are getting colder now (5°F.); he has not yet made up his mind whether he is enjoying the experience.

November 18, Muktinath

There is a pervading sense of peace about this shrine, sacred to both Buddhists and Hindus, set 3000 feet above the Kali Gandaki river against a mountain wall, facing Dhaulagiri. Though pilgrims from all over India and Tibet visit this spot by the thousands each year, it is now the off season, and the rest house, the temples, the lush but tiny grove of handsome,

spring-fed poplar trees, are virtually deserted except for local holy men. This is a diversion from our route, but basically we are relaxed because we are on the homeward trek and all of the major obstacles, the passes that could be blocked by snow, the uncertainties of finding yak transport, are now behind.

None of the several peaks and peaklets that were climbed two weeks ago, back in the Tekochen La area, really required the use of a rope, though one was used on one occasion. Because of the local climate no glacier or ice problems were encountered at all. For the most part it was a question of myself running off with a Sherpa and doing some enjoyable ridge hopping (under the guise of "exploration"), while John and Casey were engrossed in triangulation. Fred, unfortunately, was being bothered again by a leg infection and remained below after an initial trip to "Tekochen Peak." With Ang Dawa on November 3, I traversed a long ridge to the south across three minor summits to a small snow peak (18,300 feet) with the local name of Ama Tsumen. On the following day, Phurkipa and I spent many hours reaching the top of an unnamed 18,800-foot rocky peak north of the pass, in the process crossing or circumventing an enormous number of gendarmes. The strata here were tilted absolutely vertically and had weathered unevenly, turning about 1000 feet of ridge into a series of transverse knife blades several feet thick and ten to twenty feet apart.

With the theodolite work completed, we all returned to the Base Camp and conveniently sat out a one-day storm, waiting for yaks to appear from below. They eventually did, just as the crisp blue skies came sweeping across from the south driving the clouds to nothingness. The usual hours were spent haggling, and then we found ourselves enroute directly back across the Mukut Himal via an easy pass not even suggested on the existing map. This pass, the Shulong La, rises to about 17,500 feet and is approached by a long series of gentle traverses around subsidiary ridges. Above it stands another of the small rocky peaks that abound in this area, which looked to Cronk like another good survey point. When he, Ang Norbu and I got up on the ridge, however, we were made aware again of a major reason why major summits are not generally attempted in November. Although the sky was devoid of cloud, the great swirls of snow kicked up by the strong and gusty wind, combined with relatively low temperatures, made for conditions in which simply standing still was very uncomfortable and operating a theodolite was out of the question. We climbed as far as a lower summit at 18,900 feet from which both the Thije La and the Tekochen La were visible, shot a quick round of pictures, and left that spot without further ado to rejoin the others across the pass.

Two days later, after descending a long valley in an unexpected southeasterly direction, we had the good fortune to be visited by a ragged, colorful group of lamas, just out of Tibet and on their way as pilgrims to visit the Dalai Lama in exile in India. Early on a morning bright with frost, and with the thermometer just a few degrees above zero F., they packed up their nearby camp and came strolling over to stare at us as we at them; some two dozen people of all ages and sexes. Soon lama begging-songs were being immortalized on tape and Polaroid film, etc., etc., and we had made fast friends.

On we went over the Thije La, the last high pass, where a few more angles were recorded and a few more botanical specimens were grubbed from the snow. Then down the many thousand feet to human habitation once again on the Kali Gandaki side. As a final brief excursion for geographical interest, Fred, John and I walked up the upper Keha Lungpa to look at the lower end of the "Hidden Valley" discovered by the French in 1950. After walking half the day up a spectacular trail over which even the local men will not take loaded yaks, we of course simply repeated Prof. Kawakita's finding of last year. This is that the Hidden Valley ends in a magnificent but completely impassable gorge, with cliffs several hundred feet high falling sheer to the torrent's edge. No way through here, so we were content to return, pack for the journey to Tukuche, and curse anew at the yak men for taking advantage of their monopoly situation by noticeably underworking their animals. We sent them on ahead a few days later with Ang Dawa while we diverted our steps to Muktinath out of the wind and dust of the valley. To escape the retinue (now 17 yaks and 5 Sherpas) even briefly and to relax in privacy is always a pleasure.

November 30, In the air between Pokhara and Kathmandu

All the giants of west-central Nepal (Dhaulagiri, Annapurna, Manaslu, Himalchuli) are floating by the window as we cover a two-week walk in forty minutes. Shortly, we will land back in the 20th century in that confusion of temples and Western tourists that is Kathmandu. The last week of travel in uniformly good weather from Tukuche to Pokhara was for the most part through country new to us, and was a scenic joy all the way. A glimpse, like the hint of a yeti legend, of langur monkeys flitting through the woods at 9000 feet against the background of the great south wall of Dhaulagiri; the twin spires of Machapuchare, tearing the clouds 19,000 feet above the deep, green V of the Modi Khola; these are the sort of memories that do not fade.

More than this, as we look back on the expedition we are deeply satisfied. Somehow the fact that the four or five ascents made were all of minor mountaineering importance does not seem to us of prime significance. To have lived for a few months the elemental mountain life in close contact with the rugged people who know nothing else; to have added our small increment to formal geographical knowledge of one of the most spectacular regions on the globe; to have experienced and met, both singly and collectively, the spiritual and physical challenge of a climb to even moderate Himalayan heights; these are the rewards we have been seeking. That we have found them north of Dhaulagiri this year has been our great good fortune.

Summary of Statistics

AREA: Mukut Himal and Kanjiroba Himal of west-central Nepal.

First Ascents:

Mukut Himal—"Tongu Peak," ca. 20,500 feet, October 18, 1959 (Dunn, Noxon, Humphreys).

Eastern Kanjiroba Himal—"Tekochen Peak," ca. 18,300 feet, October 31, 1959 (Dunn, Noxon, Humphreys).

Ama Tsumen, ca. 18,300 feet, November 3, 1959 (Humphreys, Ang Dawa).

Peak north of Tekochen La, ca. 18,800 feet, November 4, 1959 (Humphreys, Phurkipa).

Attempted Ascent:

Mukut Himal—Hangde, 21,600 feet, October 21, 1959 (Dunn, Noxon, Cronk)—to 21,400 feet.

PERSONNEL: Caspar Cronk, Frederick L. Dunn, M.D., John S. Humphreys, John F. Noxon.

K2—Giant of the Karakoram

DAVE BOHN

Tragic news reached me in late November, for I learned of the death of Günter Jahr, hit by an automobile in Munich while riding his motorcycle. Though Günter spoke no English, and I no German, we shared twelve fine days aboard the Lloyd Triestino "Asia", accompanying our forty-one crates of expedition equipment through the Mediterranean and the Red Sea to Karachi. To a most able and friendly climbing companion, then, I dedicate this brief account of the 1960 Karakoram Himalaya Expedition to K2.

WE REACHED Base Camp at 16,400 feet on the Godwin-Austen glacier on June 14 at about 7:30 in the morning. There was a high wind and it was cold and may I never see a more desolate, inhospitable spot on this earth. Half the Sahibs went to work paying off the shivering porters, who then raced away in twos and threes down the glacier toward the Concordia amphitheatre, the Baltoro and, they said, Urdukas that night. The rest of us struggled with the second large tent and the cookstoves, and shortly presented our bankers with a cup of hot orange juice.

Fourteen days earlier we had left Skardu, but space, or rather the lack of it, does not permit me to tell the tale of the march in, to speak here of some of the one hundred characters who carried our equipment for us, nor of some of the thirty who carried food for the porters carrying the equipment, nor even of the final twenty-five who carried food for those porters carrying food for those carrying equipment. Nevertheless, before proceeding with the story, I must mention how excessively grateful we were to our liaison officer, Captain Sharif Ghafur, on that raw day of arrival below the southwest face of K2. You see, we had come all the way from Skardu *without a porter strike*.

The following day Wolfgang Deubzer and I made a late start for Camp I with nine porters in tow. We tied in at the end of the moraine because there were some crevasses coming up, and Wolfgang shortly thereafter dropped into one up to his waist. Longino, who was behind me, became greatly excited and sprinted *past* me headed straight for the crevasse to assist. I managed to flag down our impetuous one before he blundered into the same hole, and Wolfgang easily extricated himself. We pushed on through the icefall at the base of the mountain, but it was

getting late and Taqi wanted to cache the loads at the bottom of the rock slope directly under Camp I. This I agreed to, but the porters, instead of heading back, scattered in all directions looking for old Italian equipment. I was somewhat less than overjoyed at these events, and Taqi very quickly got the point; the treasure hunt was canceled immediately.

On June 19, Taqi was supposed to show Ludwig Greissl and me the route to Camp II, for he had been that far with the Italians in 1954. He pointed the way up a couloir which starts above the rock cliffs behind Camp I. As we struggled for hours with powder snow—on rock slab at times—it became all too evident that this was no route over which laden porters or Sahibs could travel. It also became evident Taqi did not really know for sure just where Camp II was, and at five P.M. we threw in the towel, cached our loads at the top of the couloir, and managed to get back to Camp I just at dark. The following day Herbert Wünsche and Günter strung the first of 8000 feet of fixed line as they reached Camp II at 19,100 feet.

We were having trouble with the small two-way radios, and contact with Base Camp was always questionable. I remember dragging out of the tent one morning and crossing to the ridge east of Camp I. There I stood for twenty minutes in the biting wind trying to get through to Lynn Pease, and when I finally did, I could hear about every fourth word. But I *was* barely able to learn Hayat Shah had arrived from Concordia the night before, and would soon be joining us on the mountain. Thus ended an epic tale of perseverance, for Hayat had waited a full week at the village of Dassu for permission from his own government to travel further, but with infected blisters was forced to return to Skardu and spend several days in the hospital. Finally, the powers-that-be magnanimously allowed him to join the expedition, which was by then very nearly at the mountain. Hayat marched alone to Askole, from Askole to Concordia at the head of the Baltoro with one porter, and the last day alone to Base Camp!

The Italian fixed rope, much of which we used advantageously, held great fascination for our high porters, and they began to amass quantities of it. Makhmal in particular was a devoted scavenger of this item, and I recall the day Lynn was so late in returning after carrying to Camp II. He had passed Makhmal, who was moving slowly because of an injured knee, on the way down, then became alarmed when he was unable to see the porter coming behind him. Lynn, tired as he was, climbed back up over 500 feet and there was Makhmal cleverly removing Italian rope from one of our own pitons! We had a wee lecture next morning, and no more old rope was collected until the mountain was evacuated.

There was at first total agreement that the food we were eating on the mountain—for the most part Army dehydrated—constituted a fine diet. Later on, some opinions changed, and there were discussions over the merit of our rations. I myself do not see how it would have been humanly possible to have obtained a better balanced diet, nor do I know of any way to avoid repetitious meals when in the field for three months. Certainly Bill Hackett deserves great credit for the menu he worked out. I *will* admit that occasionally a dish did not turn out to be as savory as anticipated, and I remember creating a magnificent casserole of hamburger, string beans, cheese, and red cabbage, which concoction was so salty it went begging. Some days later I discovered the red cabbage was in reality Malwa Tea leaves! Porter rice on the mountain became for some of us a delicacy. Taqi and Asad, huddled in their tent, would prepare it in the pressure cooker, then pass to us a steaming bowl. With the addition of maple syrup (at Lynn's suggestion) we had what I felt was the taste sensation for K2 1960.

On June 20, Bill and Ludwig established Camp II. A few tattered strands of an Italian tent reminded us of our predecessors on the mountain. In my opinion, this campsite is, from the point of view of rockfall, by far the most dangerous on the Abruzzi Ridge. It is wide open for anything coming down from the Camp III area, and we had several bad moments there as we were shelled from on high. By June 24, Günter and Herbert had completed fixing the lines to Camp III, and on June 27 Ludwig and Günter established themselves there on the tiny shelf at 20,350 feet. The traverse into Camp III was ice, covered with powder snow, made the more uncomfortable because this couloir was a favorite thruway for artillery from above. Taqi, for one, was very nearly hit in the head when in the middle of the crossing.

Camp II had by now become an advance base with two Gerry Himalayan tents, a Klepper tent, a Pionier tent, all oxygen equipment, 5000 feet of manila for fixed rope, about eighty man-days of food, two high porters, and four Sahibs. Living space was at a minimum, obviously, and my left elbow was sore because it was at Camp II that I celebrated my fourteenth straight day of living in the wrong Gerry tent—that is to say, the tent used for communal cooking. Of course, I *could* have rolled over on the right elbow, but I cannot cook while leaning on my right elbow. This caused problems when Bill and I shared a tent at II because he cannot cook either while leaning on *his* right elbow.

On the 2nd of July the crowded plateau of Camp II saw much activity for Hayat and I were to move up and establish Camp IV at 21,150 feet, just below House's Chimney. We were accompanied by Lynn, Taqi, and

Asad, and it was a long day. Steps broke out under Lynn at the Camp III traverse, and in deteriorating weather and icy conditions, Hayat peeled off the difficult rock pitch just below Camp IV. However, both these men were clipped in to the fixed lines—which now ran all the way from Camp I—and disaster was averted. With darkness close at hand, Lynn and the two porters dropped their loads below the icy pitch and dashed for Camp II in a snowstorm, while Hayat and I moved on the last yards to the tents, to be met there by Günter and Ludwig who had that day finished stringing the manila up the rotten rock ridge we had just ascended. After ferrying the loads left by Lynn and the porters, these two disappeared into the wind and semi-darkness, leaving us to the flapping tent.

Two days later, in magnificent weather, Hayat and Günter and I ascended House's Chimney and fixed the ropes to Camp V, where we sat in the warm sun and feasted on 1953 raspberry jam.

The steel cable used by the Italians was still hanging from the top of the chimney, but at the bottom of the rocks it trailed off into the ice. Fighting appalling lassitude, I helped Hayat chop a fifty-foot long trench to free the wire, and later that day we completed rigging a permanent cableway, over which we ran gunney sacks on a pulley—winched to the top of the cliff by a manila line. The same day, good news came from below; Bill's badly infected heel had cleared sufficiently to allow him to move to IV, and Herbert, who had been at Base recovering from a bad throat, was in Camp II and moving up with Wolfgang and Longino.

At Camp IV, we began to get the perspective of height, for Broad Peak was gradually sinking, and we could see more and more of the vast Karakoram. I well remember the day Hayat and I sat at the top of House's Chimney for a lunch break, before heading for Camp V with the fixed rope. There was hardly a cloud in the sky, and prominent to the south-west was Masherbrum which for many days had been plagued with bad weather. And Hayat claimed he could see the pyramidal tents of Base Camp on the moraine 5000 feet below, but I accused him of telephoto vision because even with the binoculars I could see nothing.

On July 6, with the weather holding, my Pakistani companion and I staggered late into Camp V with heavy loads, thus establishing ourselves at 22,000 feet.

There were now signs that our benevolent weather was coming to an end, but Hayat, Bill, and Herbert managed to get the route in to Camp VI, at 23,175 feet and on July 10 Ludwig and Günter occupied the orange tent there, bidding a reluctant goodbye to the other three who had to return to Camp V in what was by then a bad storm. In retrospect, it is

easy to see that this blizzard *did* signal failure, for Camp VII was not destined to be established. Violent winds continued unabated on July 11th and 12th, and snow began to build up on the windward side of the tents, further restricting the already crowded living conditions.

Supplies moved up on the next day, with Taqi and Asad, in their clumsy Korean boots, carrying loads to Camp VI with the others, while Ludwig and Günter did a great job of reconnoitering above VI in dangerous ice conditions and high wind. On the 14th of July, Herbert was able to get through to Camp VI, but the weather was too poor for him to return, and then for five days no one could move either up *or* down as the storms raged. The winds were so high at Camp VI that none of the three men there (all in one tent) could venture outside, not even to relieve themselves. They were forced to use plastic bags for the purpose, and it is not necessary to point out the forbearance needed to cope with such a situation.

On the 30th of July Hayat and Herbert placed fixed rope to the ice traverse below Camp VII, but at just under 24,000 feet, this was the end. Time was running out, and the party was decimated by illness: Ludwig was in Base with fever and kidney trouble, and Makhmal had been there for some time with his swollen knee. I had earlier been forced off the mountain by what was apparently an insistent low-grade virus, which had been with me for over four months.

In the meantime, Lynn and I had left Base for Askole to request porters. We were not in good shape and were carrying heavy packs, but the story of this long, lonely, and physically excruciating hike out is a tale in itself, not to be told here. As the two of us moved on to the Baltoro Glacier at Concordia, we turned for another look at the Mountain; the rest of the Karakoram was clear and still, but the inevitable cloud on K2 hung across Camp VI, and a snow plume from near the summitt testified to the merciless winds above.

Summary of Statistics

AREA: Karakoram, Pakistan.

ATTEMPTED ASCENT: K2, 28,250 feet.

PERSONNEL: Climbing team: Major William D. Hackett, leader; Dave Bohn, Lynn M. Pease, Americans; Wolfgang Deubzer, expedition doctor; Ludwig Greissl, Günter Jahr, Herbert Wünsche, Germans; Hayat Shah, Pakistani. Liaison officer: Captain Sharif Ghafur. High porters: Taqi, sirdar; Asad, Makhmal, Longino.

In the Foothills of the Karakoram Himalaya

DAVE BOHN

THIS IS a story about a small village, 10,000 feet high in the mountains of Baltistan, West Pakistan. It is a very short story, but then, I lived there for only seventeen days. Yet, in that time I came to know something of the rhythm of life in this community of three hundred; you see, I listened to Askole get up in the morning and I listened to Askole go to bed at night. Then pretty soon I began to watch Askole, though not as carefully as Askole was watching me, and finally I was ready to make an attempt to photograph Askole. And now I guess it is time to write of Askole, but it will be short as I have already warned, for seventeen days is not a long time. Still, I wonder. In many ways those days were for me a lifetime.

* * *

It was July 23, and with my climbing companion, Lynn Pease, I left Base Camp on the Godwin-Austen glacier, headed for Askole—the first village—to order porters to carry the 1960 Karakoram Himalaya Expedition out from K2. We had with us food for six days and were carrying 55-pound packs. It took us eight days to reach our destination, arriving as we did in the late afternoon of July 30 with one sprained and bandaged ankle, three infected toes between us, wearing assorted boots and sneakers, trousers ripped from the rope bridge, and clinging tenaciously to one small bag of salt and one-half of one small bag of macaroni, the last of the food.

There was, of course, great excitement in Askole that first evening. Two Sahibs had come out of the mountains—two curiosities most recently returned from K2, but much more important, two *rich Westerners* from the strange world beyond concept. The gallery formed and grew and diminished, and formed and grew again, and then came eight eggs—omelette style—two boiled chickens and fourteen chapattis, the staple wheat pancake. The gallery stayed on, for Sahibs are strange creatures indeed; even when eating, or perhaps *especially* when eating, they are a source of much

amusement. And so, our first real meal in eight days was finished by the light of a candle in Askole, Baltistan, just 12,000 miles from home among people whose language we could not speak, nor they ours. We slept that night secure in the knowledge that on the morrow and thereafter for some days we would not have to get up at five o'clock and put on those insufferable, appalling packs.

Now mornings in Askole started for us with *whumps*. A *whump* is not an insect, nor does it crawl or bark or watch the Sahibs. A *whump* is the sound made in those very early morning hours by the dumping of dried manure from the cow (yak) sheds on the manure piles. The men do the shoveling, which is easy, and the women carry the manure in baskets on their backs, which is hard work. The women dump over their heads and I know perfectly well what all this sounds like because I lay in my sleeping bag every morning in the otherwise stillness and listened. At first I could see nothing because we were quartered in an enclosure surrounded by a low stone wall. But as the piles grew higher, they rose above the level of the wall and I could both listen *and* see, without getting out of the sleeping bag. And if I was really very still and pretended to be asleep I could peek at the women peeking at me, but just for a moment or two before they hustled off.

By this hour some of the men were headed for the fields to see about the waterworks, perhaps to repair a canal or possibly to make sure their own individual acreage was receiving the proper amount of the precious wet stuff, to see that the intricate irrigation system continued to keep alive the *atta*—wheat—that makes the chapattis that keep alive Askole. But of course, a short pause to peek over the wall at the Sahibs—to be assured we were still there, to know whether we were lying on our stomachs or our backs, but mainly just to *look* at these strange men from the world outside.

I had no watch in Askole, but I know precisely what time breakfast arrived each day; breakfast arrived exactly as the sun was not quite over the ridge to the east, and certainly this was the proper time for breakfast because . . . well, just because it *was* the right time as anyone would surely know. Husayn and Haji Mehdi—eldest and next eldest of the four sons of Hassan, Askole's head man or *Nambardar*—usually brought the day's first meal, Husayn carrying the pot of salt tea and two cups, and Haji carrying the tin plate with the inevitable eight-egg omelette. The cups and plate had been gathered in various ways from the Italian K2 expedition of 1954, but we ate with our fingers, a much more sensible and direct method than with a fork, and there were no forks in Askole anyway. Thus, with the sun not quite over the ridge, we had breakfast as the two brothers sat on their haunches and watched us.

And then with the sun came the flies—thousands of them or maybe even hundreds of thousands—and they were with us until sundown, making life generally somewhat miserable. But I guess one gets used to being half covered with these useless things, and I suppose I did.

Here and there as I ventured out on the streets of Askole each morning, one or two women would still be trudging bent to the manure piles, but most of them were by now in the fields, gathering newly ripe turnips or heading out for an immense load of sage-like fuel to be piled on roof tops for future use. Those remaining in the village were usually making thread or working on the looms or hiding from my eyes. I pretended complete indifference, and little by little I think I began to be accepted with less trepidation, for the women no longer fled at my appearance and a few of them would continue to sit where they were if I came up to see what they were doing. But if I had so much as touched the camera at my side, they would have been off immediately. This never happened; I was a guest in Askole and had no intention of forcing the photographic issue. However, I did photograph the men and boys on my early morning walks, and this I attempted about every other day, preferring not to unnecessarily intrude with the camera on these friendly hosts.

There is no drug store in Askole, but there is definitely a "corner," and here each mid-morning some of the men gathered, sitting on the ground spinning their thread from the coarse goats' wool. They were gossiping, about what I know not, but since Askole has no games of skill, no dancing or singing or drinking, and no art work to speak of, gossip becomes the great recreation. As I passed this important corner, I would receive the customary "Salaam, Sahib," return the greeting and hurry on before any of them could ask me for a cigarette. Occasionally, though, I would stop and sit with them, and a certain amount of communication took place by gesture or one or two key words I had gained from my very small Balti-Urdu-English dictionary. The water pipe was usually being passed, in the proper order, but I always graciously (I hope) declined because all those who *did* smoke it were overcome with paroxysms of cough, which coughing did not apparently detract from the pleasure of the thing.

Since my companion and I averaged four small chickens and sixteen eggs a day there came a time, after about a week, when the *Nambardar's* supply was exhausted. So with Haji we meandered two miles to the village of Thongal and there observed an immense round of bargaining, though at first no eggs or chickens came, for the water pipe had to be lighted and passed among Thongal's hierarchy and Haji. The presence of the two Sahibs lent a festive air to the occasion, I think, and we were minutely

observed by the entire male population. Eventually three eggs did appear and a space for the produce was cleared in the center of the gathered humanity. When there were nine dozen eggs and something like fifteen chickens, Haji decided we had enough. But before we left I was rather shyly petitioned by Hasan, Thongal's stern head man, for a picture of him beside his house. In preparation, he dusted off his coat and smoothed his hair, and I smiled inwardly—but was just as stern as he when I maneuvered him into position.

With much handshaking we finally detached ourselves, Haji carrying the chickens on his back and I toting the eggs, at least part of the way—and I must say I never expected to be carrying nine dozen eggs in a basket across a rocky hillside toward Askole, high in the mountains of Baltistan.

When we returned to Askole that day there was new excitement, for word had filtered through from the peaks beyond that our expedition liaison officer, Captain Sharif Ghafur, was arriving from Base Camp. Arrive he did that afternoon, and with a huge crowd looking on, the three of us drank our afternoon salt tea—now with a twelve-egg omelette—and reminisced of the mountain K2. Sharif, as a native of Pakistan, spoke Urdu, enabling him to communicate directly with some of the more sophisticated Askolians who would then translate into Balti for the rest. Sharif also spoke flawless English, which meant my American companion and I could now enter a bit more into life in Askole. But unfortunately, a day or two later Lynn Pease's available time was up, and with one porter he disappeared over the Skoro La, 16,600-foot pass opposite Askole, headed out for Skardu, Karachi, and America.

There was no small amount of interest, on the part of the young boys and the men, about America, and just exactly "where" it was. I put *where* in quotes because in Askole the concept of the world is extremely hazy at best. Only one man, Haji Mehdi, has ever been out of West Pakistan, and probably no more than five of the men have ever been beyond Skardu, sixty miles distant. The women travel not at all. Thus one night the subject of Sahib Pease came up. Was he in America yet? I pointed out, through Sharif, that he would be there tomorrow when the sun in America was half way between *up* and the horizon, but that when there was sun in America there was no sun in Askole. The statement caused much consternation for our less-than-worldly-wise audience quite naturally assumed that when they got up in the morning to work in the fields all other sensible peoples were doing the same. Forthwith we had an astronomy lesson as we sat eating in Hassan's house with his sons and the chickens. Using a ball of Askole thread for the earth the lecture progressed, and as

Haji translated Sharif's Urdu into Balti for his aged mother, there were grunts of rather amazed understanding (I think) from the dark corner where she sat. Hassan's only daughter was there too, but perhaps afraid to ask her brother questions while we were in attendance, for she ate her chapattis in silence.

Intellectually speaking, the most curious of the Askole men was Fazil. He would come and sit on the ground beside me as I read—or tried to read—and point to my shirt, asking the English equivalent, and would reciprocate by giving me the native word. Nor was Fazil backward about asking for things, and since the shirt I had was a red one he was very anxious to have it. On several occasions, then, I was invited by Fazil to visit his house where he proudly fed me *fruce,* or goat's cheese, while we discussed the desired article of clothing. Such negotiations take time and were complicated by the fact that Fazil's uncle actually owned the blanket *I* wanted. But eventually we reached an agreement; my shirt and a pair of socks plus some rupees (cash) in trade for the blanket.

It was also Fazil who had a pain in his wrist. We had only a few minor medications with us and would have been deluged with requests had we dispensed without caution, but Fazil was not to be put off. We finally gave him some sunburn cream which he carefully rubbed on the sore joint, and the next day he reported definite improvement. Two days later Fazil presented us with six hard-boiled eggs as *baksheesh* for having cured him.

In these high, arid mountain villages, stealing water is a fairly serious crime, and during one of our daily morning chats Fazil told us they had "caught" someone the night before. Actually the culprit was not apprehended in person, but they knew who had so turned a rock that water might drain into the wrong canal, wrong at least for that particular time of the night. But Fazil indicated the thief would come to no harm on his return to the village because tempers had cooled, though our informant admitted there would have been a scuffle had they caught the man red-handed. Nevertheless, stealing of any kind is not common in Askole, and relations seemed to be remarkably peaceful. There *was* a slight feud with Karfow, across the river, over which village was responsible for fixing the swaying rope bridge (it has been said they are never fixed until broken) we had crossed on the march out from Base Camp, and I *was* told that women from Shigar, forty-five miles away, do not make good wives because they will not work hard enough in the fields, but by and large the communities get along well with each other.

The nearest school is in Shigar, but in Askole they are skeptical about education for, as Fazil said, who will work the fields if the children are

sent to school just as they reach an economically productive age? And besides, a man is liable to get a little education and then consider himself a bit too good to get his hands dirty. Thus, said Fazil, *he* was content where he was and why not his children? When I tell this little story over here, the smug Westerner almost inevitably says "I should think they would want to lead a better life." Ah yes, but "better" for what, and who will qualify to answer that?

Now sometimes as I sat reading in the afternoon, covered with flies, I would have a timid visitor, age about 10. This was Reni, and he would quietly present me with a bouquet of purple flowers which I would carefully put in the fold of my Gilgiti cap, for this is customary in Baltistan (and elsewhere in the East); the men are fond of flowers, and even wear them on their ears in many cases. Occasionally some of the other boys would bring a handful of peas-in-the-pod, hoping for an exchange gift, but I think Reni just wanted to be friendly. When he became a little less shy I photographed him, for he was one of the few truly photogenic (by our standards) children of the village. I had the feeling, too, that Reni wanted very much to hear of the world, but the language barrier and his reticence presented obstacles too large to be overcome in seventeen days.

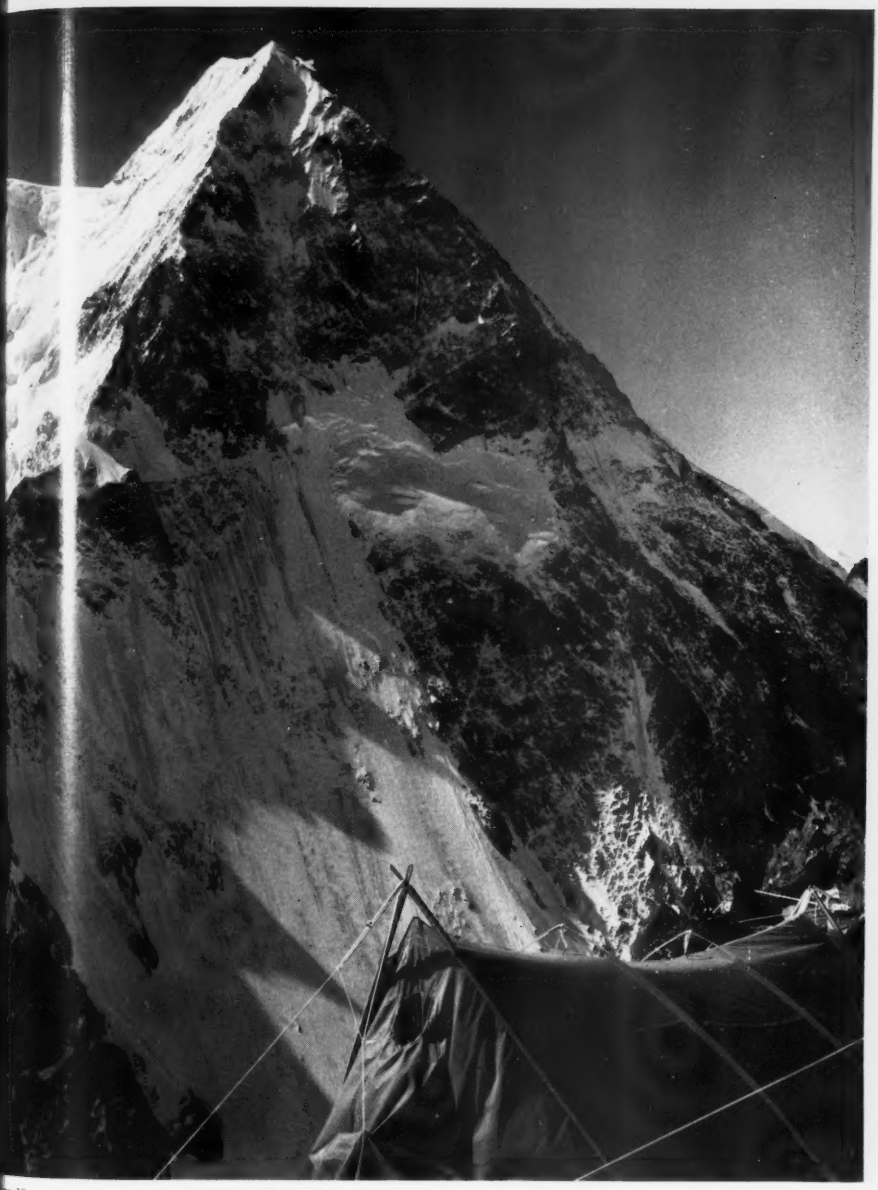
Another faithful afternoon visitor was Hassan, the *Nambardar*. He always dropped over to see how we were doing and Sharif would talk with him endlessly. Such visits were considered a proper courtesy, and as the sun began to lower in the west each day I usually sallied forth to return Hassan's earlier call. For me, this was at the same time the best and the strangest part of the day. From Hassan's rooftop I could survey Askole in the late light, and watch the smoke from the cooking fires—while Hassan singsonged the Koran, sitting cross-legged and rocking back and forth. And then, when the sun was down, Hassan climbed to the top of his "penthouse" and called to prayer. Later, I would descend the ladder into the square roof-hole and wait for dinner with Sharif and the men of Hassan's family. The women do all the cooking and the men eat first and separately. By candlelight, Haji and Husayn and Sharif and I would eat our chicken and chapattis, taking care to chase off the live chickens when they became too insistent. A cup of buttermilk, brought down in goatskins from the high summer pastures, came last—and while Sharif talked with the brothers, I too sat cross-legged, but silent, reflecting on the strangeness of the dimly-lighted scene.

Abruptly one afternoon the rest of the expedition came out of the high hills, and it was time to leave. As suddenly as we had descended on Askole, we were gone. Hassan's family—that is, the males—gathered on

their rooftop and watched us file away toward the river and the rope bridge to Karfow for the trip over the Skoro La. Haji came with Sharif and me for a short distance—then the goodbyes and a last wave of the hand.

When I left Askole behind that hot August day, it seemed to me we had created there genuine bonds of affection, for I think they were truly sorry to see their two guests leave. Naturally, for both sides there had been moments of annoyance and misunderstanding, and for me the inability to communicate properly had imposed great strain. Further, as a cellophane-packaged Westerner, I was of course fairly constantly afflicted with the troubles stemming from conditions less sanitary than those we know here. But in spite of the obstacles, in spite of the conceptual chasms separating an American from these people—chasms so much greater for them than for me—the gap was at least partially bridged. I adjusted and lived on their terms, and they adjusted to me as a curiosity in their midst.

Half a world away the rhythm of life moves on in Askole. And though the never-to-be-forgotten early morning *whumps* are stilled at least until next summer, the sound of Hassan's call to prayer each sundown will even now be drifting across the foothills of the Karakoram Himalaya.



All photos in this section by Dave Bohn

BROAD PEAK FROM CAMP II ON K2.

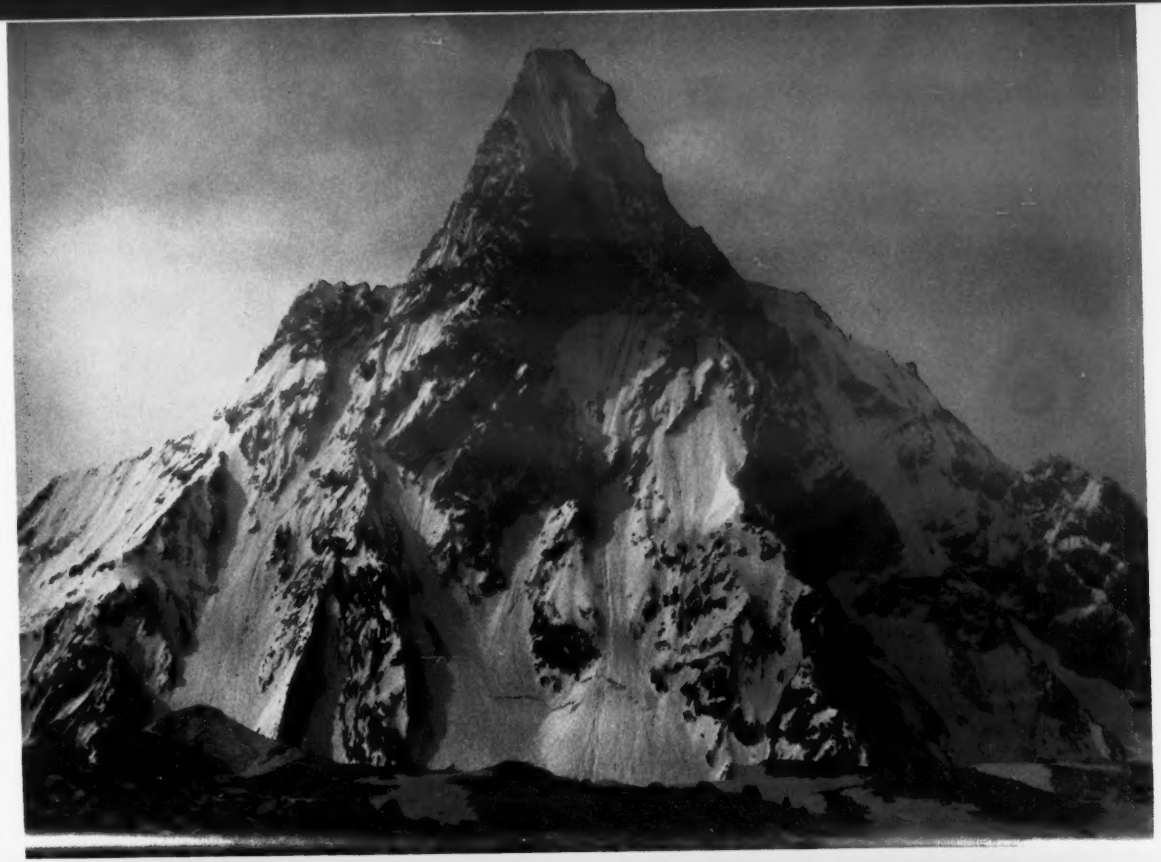


PLATE 29

MITRE PEAK FROM CONCORDIA

PLATE 29

MITRE PEAK FROM CONCORDIA

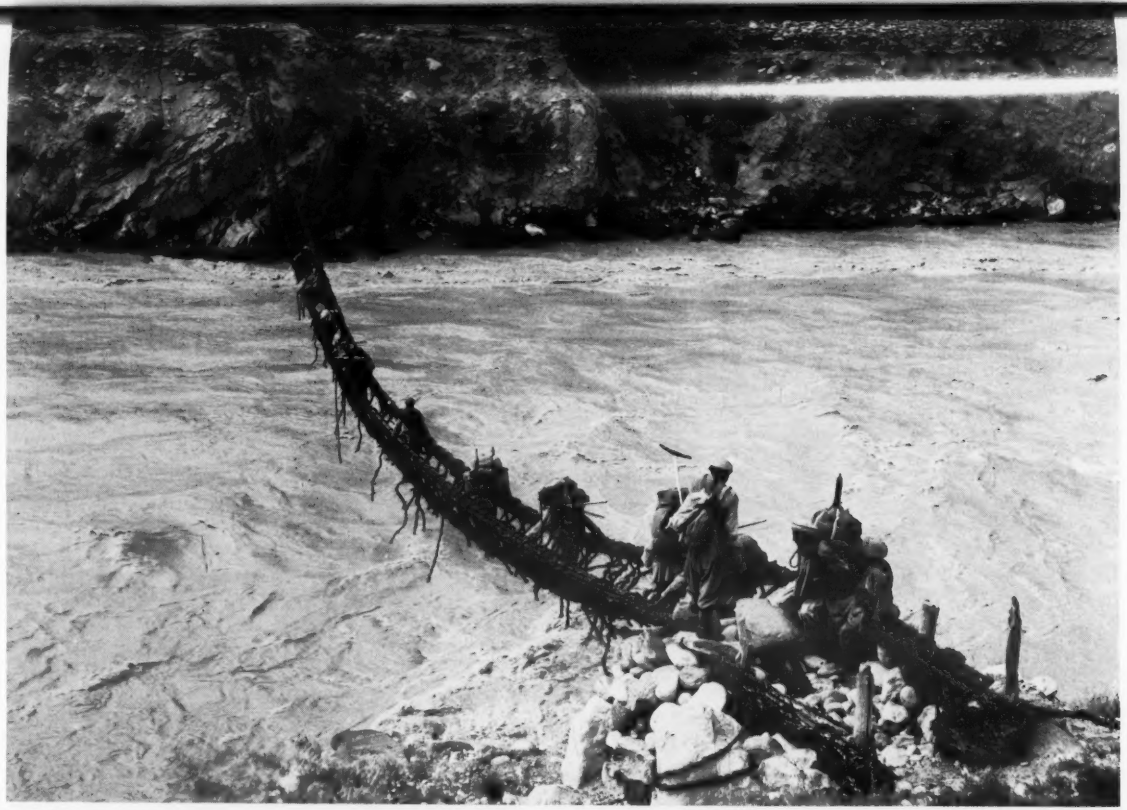


PLATE 30

ROPE BRIDGE AT ASKOLE.

PLATE 31

ALI HAJI.

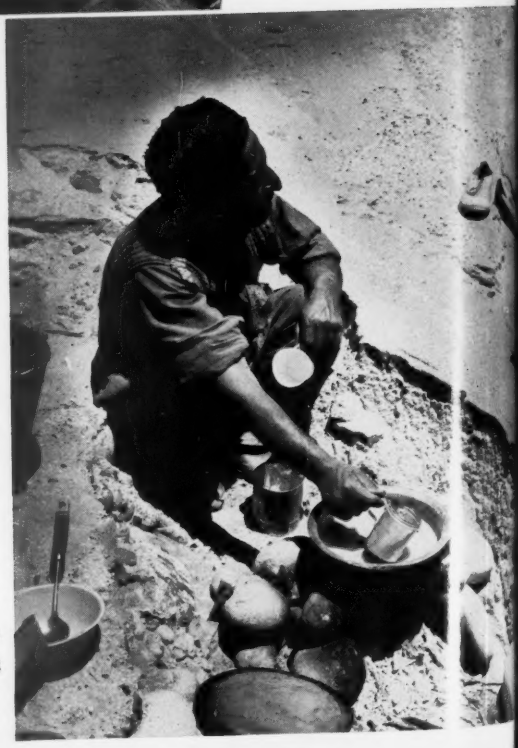
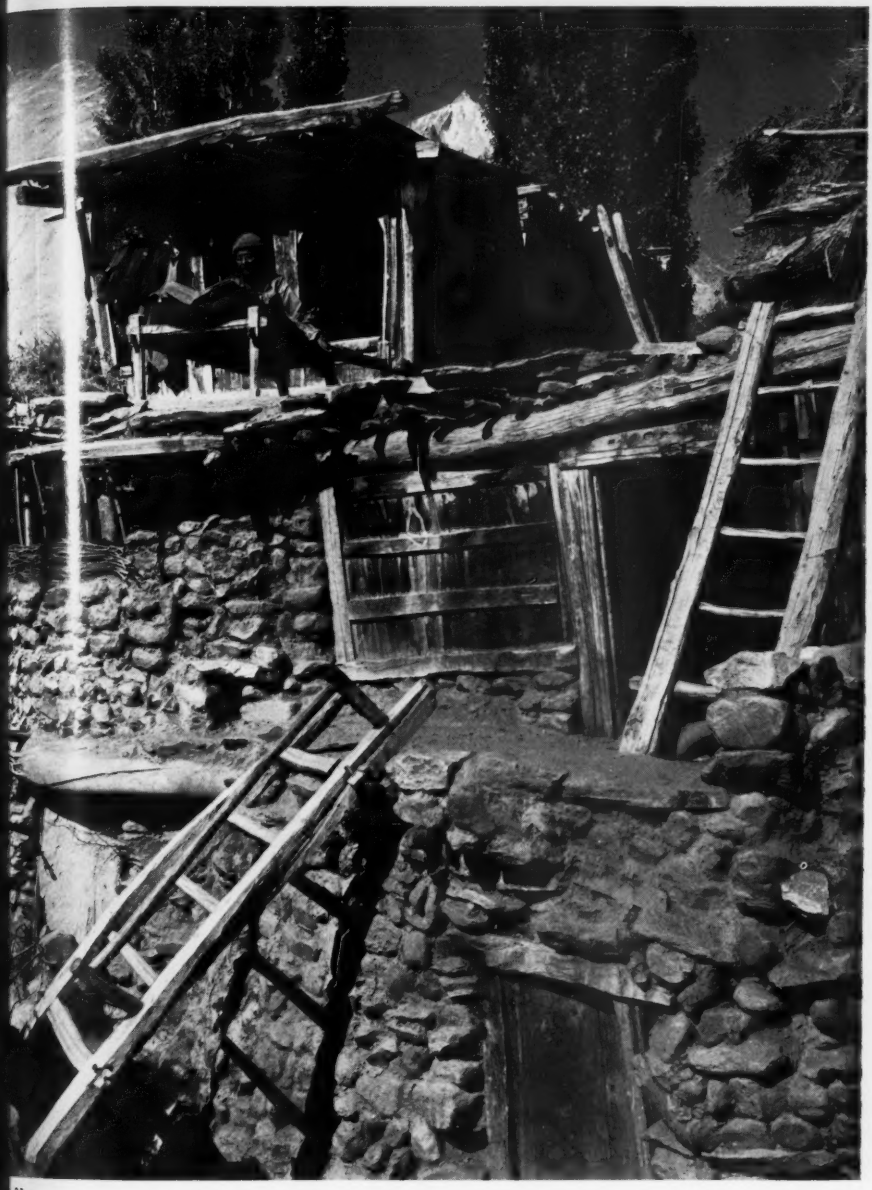


PLATE 32

GHULAM MUHAMMED AND HIS POT OF SALT TEA.



33

NUMBADAR'S HOUSE AT ASKOLE.

PLATE 34

HUSAYN.

PLATE 35

RENI.

PLATE 36

MORNING SESSION AT THE "CORNER"—Askole.

HASSAN SING-SONGING THE KORAN.

PLATE 37

PLATE 38

ASKOLE AT SUNDOWN.

Japanese Himalayan Expeditions

I. HIMALCHULI, 1960

JIRO YAMADA

IN COMMEMORATION of the centenary anniversary of Keio University, an expedition to the Himalayas was programmed, and this was the earnest desire of our club since before the war. In no time the Himalayan committee was established and we decided on Annapurna II as objective of our climbing. An application for the peak was immediately submitted to the Nepalese Government. Nearly a half year later we received word from the Nepalese Government that the permission for said peak was given to an English team.

Consequently we were forced to change our objective, and Dhaulagiri II was selected. To reconnoiter around the peak a reconnaissance party was formed with four of our club's members. Among them leader K. Kato is known as a member of the successful ascent of Manaslu in 1956. They left Tokyo in August, 1959, for Nepal. They placed Base Camp on the northern foot of Dhaulagiri II and for a month surveyed all possible routes to reach the summit; however, no accessible route was found. The mountain was so completely guarded with narrow gorges and steep ice walls. (See *A.A.J.*, 1960, 12:1, pp. 67-8.) On the return to Pokhara they came down along Marsyandi and made a short trek to Mushi Khola from Khudi. They viewed Himalchuli from the west side and found an accessible route on her lower glacier.

Upon receipt of their confident report, the committee took up the plan of Himalchuli. Already the leader and other members had been decided. They are all ex-students or students of Keio University except the cameraman. Their names are as follows: Jiro Yamada, Leader; Hideki Miyashita, Assistant Leader; Hisashi Tanabe, Kimimasa Nakazawa, Shigeru Murata, Koichiro Ohmori, Yoshiro Kawada, Masahiro Harada, Susumu Takashio, Doctor; Katsuhisa Kimura, Cameraman.

The advance party, consisting of two members, left Tokyo on March 7. This party made necessary preparations and arrangements with the Nepalese Government and Himalayan Society. Employment of Sherpas and porters

See plates 55 and 56.

ASKOLE AT SUNDOWN.

PLATE 38

was a very difficult problem, for the noted and good Sherpas had already been contracted with other expeditions. They spent more than two weeks for this matter and were able to reserve fifteen Sherpas including local porters. They were the cooks, Lakpa Tsering and Ang Tsering V, high altitude Sherpas Ang Tensing, Ang Numgyal, Mingma Tsering, Pemba Norbu, Nima Dorje, and local porters Nima Sundder, Kazi, Pasang Tensing, Ang Gyalbu, Jyabyan Tensing, Pasang Sonum, Bagto Bahador, and Dorje.

The main party left Tokyo for Hongkong on March 12 by boat and flew from there to Calcutta. All members and equipment concentrated at Pokhara on April 10. That day they started on a ten-day's march to Base Camp. On April 19, Base Camp was pitched on the big spur derived from the Sickle Ridge, at an altitude of 13,780 feet. They spent the following days finding a route to the Sickle Ridge below the first step of the snow plateau. Camp I was established on April 25 at an altitude of 17,000 feet and Camp II on May 1 at 18,900 feet on the first step. On May 3, not long before day-break, an unfortunate accident occurred at Camp I. An avalanche from the upper glacier flowed near the camp site. A few blocks of hard ice jumped out from the flow and attacked the tents. The local porter Kazi was struck on his head seriously and found unconscious, and another local porter Pasang Sonum suffered injury on his humerus and ribs. The body of Kazi was buried with reverence in the deep crevasse just above the camp, following the Sherpas' custom of singing sad songs. The injured patient was carried down to Base Camp to be sent to the hospital in Pokhara on a stretcher improvised from a ladder.

Climbing, however, went on and Camp III was established on the second step on May 7 at an altitude of 20,700 feet. On May 19, Camp IV was established at 21,650 feet and Camp V on May 22 at 23,000 feet. Finally, on May 23, Camp VI was placed on the broad snow col between main peak and west peak. For want of oxygen, they suffered heavy headaches, and altimeter showed 23,950 feet. Two climbers slept that night in Camp VI breathing oxygen at one litre per minute. The attack members, H. Tanabe and M. Harada, left Camp VI at five. The release of oxygen was increased to two litres per minute. After hard climbing for six hours, they reached a rock wall beneath the summit, but it was not so difficult. Above the rock wall was a very steep ice wall which nearly prevented them from going up. By means of much step-cutting they climbed the ice wall, traversing to the southward. When they reached the top of a high snow head at 1:10 P.M., they found themselves on the summit of Himalchuli. The summit was long, horizontal snow ridge declining to the west and a big cornice overhung to the eastward about two or three meters (six to ten feet) long.

A bamboo pole with Nepalese, Japanese and Keio University flag was placed on the top and they took many pictures. This was not easy because of strong winds, and this impressive scene was taken through a 500 mm telelensed camera by the cameraman who situated on the shoulder (about 24,275 feet) of the west peak. Thirty minutes had passed unawares and they took their route to Camp V.

Deep emotion seized them when they met with two other members at the snow col. Snowy winds swirled and roared around them. After a short rest, they went down to Camp V.

On the next day, May 25, the weather was changing badly and winds blew hard from the east. Second attack members, H. Miyashita and K. Nakazawa, started from Camp VI at six and reached the summit at 2:10 P.M. When they returned to Camp VI the sun was completely down.

On May 28 all members met at Base Camp and toasted each other for the first ascent to Himalchuli with some glasses of whisky. Fifty porters came up from the villages on June 2 to carry our loads from Base Camp. On the day we left our Base Camp, Himalchuli was veiled deeply in the dark clouds of monsoon.

II. THE ASCENT OF NOSHAQ

Y. SAKATO

THE ACADEMIC Alpine Club of Kyoto succeeded in making the first ascent of Chogolisa (25,110 feet) in 1958, and in 1960 sent an expedition party to Noshaq (24,574 feet), the second highest peak in the Hindu Kush. The party had two objectives: to make scientific investigations in the Afghan Pamir and to try the ascent of Noshaq. Members were as follows: Prof. Yajiro Sakato (Leader, Biologist), Dr. Riozo Yosii (Biologist), Dr. Hideho Sawata (Geologist), Yukiharu Hirose (Chemical Engineer), Toshiaki Sakai (Student), and Goro Iwatsubo (Student).

Negotiations with the Government of Afghanistan lasted for three weeks at Kabul; we could not get permission to journey through the Wakhan corridor and our activities were restricted to Noshaq and its adjacent regions. Leaving Kabul on July 1, we reached Ishkashim on the 14th and after two days march on horseback, Base Camp was made in the Qasdeh valley at the altitude of 10,100 feet. The following ten days were spent making Camp I (12,500 feet) and Camp II (14,750 feet) on the moraine of black slate, which covered almost entirely the surface of the lower part of the Qasdeh glacier. The only possible way to the summit was to go up

on the main glacier as far as the inner sanctuary and then climb the southern slope of the mountain.

While we were taking rest at Base Camp, a Polish mountaineering party arrived there quite unexpectedly. We were very much surprised to know that they intended to climb the same mountain, which news I had heard at Kabul as an uncertain rumour. Next day we started again. Camp III (18,200 feet) and Camp IV (20,670 feet) were established on August 9 and 12 respectively. Observations from Camp IV show that the way to the top is divided into two parts: the lower half consists of a narrow snow ridge and steep arête approximately 2300 feet in height, which is not so difficult, and the upper half is a broad and gentle snow slope.

Since one of us had unfortunately come down with a bad cold and had to stay at lower camps, and the villagers who helped us did not venture to climb on the snow, we could not pitch a higher camp on the arête. So I decided that two members would try the summit from Camp IV. Meanwhile the Polish leader, Mr. Chwaściński, and I had talked the matter over and agreed that, if possible, Polish and Japanese climbers would form one rope-party and try the summit together. But their arrival at Base Camp was three weeks later than ours, and by the time of departure of our summit party they were not acclimatized enough to try the summit with us. (See "Polish Hindu Kush Expedition" in *Climbs and Expeditions.—Editor.*)

On August 17 Sakai and Iwatsubo left Camp IV at 5:30 A.M. and in six hours reached the junction point of the arête and snow slope, the climbing being rather easy and pleasant. It took an extraordinarily long time to ascend obliquely on the vast snow slope, and they suffered from rarity of air and deep soft snow. They stood on the final snow ridge at five P.M., from where the top was seen to be 2000 feet distant and 325 feet higher, a hill of small rock pieces. At last they reached the highest point at six P.M. After half an hour's stay of taking pictures and burying a small doll as monument, they came hurriedly down the snow flank. It was completely dark when they decided to pass the night in one of the small crevasses. Next morning they started early, climbed down the arête and arrived safely at Camp IV at eleven A.M. Leaving Base Camp on August 24, we visited Lake Sheva. We made some biological and geological investigations in the regions on the way to and from the mountain. Kabul was reached on September 17.

III. THE JAPANESE YETI EXPEDITION, 1959-1960

F. YAMASAKI

WE, SEVEN MEMBERS (T. Ogawa, the leader, J. Hayashi, F. Yamasaki, H. Otsuka, T. Yoda, Y. Ozaki, and Gyaltsen Norbu) with about 100 porters left Dharan Bazar on December 2, 1959 for Namche Bazar and arrived there on the 17th. The Base Camp was set at Phurtee, a small village about two miles west of Namche Bazar. We stayed about fifty days in the Khumbu area, searching for the Yeti. Our chief aim was to collect definite evidence of the existence of the Yeti, and for that purpose we chose specially the coldest season, thinking that Yeti, if such an animal lives in the Himalaya, must come down to lower places in the severe winter to get food.

But despite all our efforts we could not find any definite footprint of the Yeti. This winter we had almost no snowfall in that area. The weather seemed to be quite exceptional this year. The minimum temperature at the Base Camp, 11,500 feet high, was −12.4°C. (+10°F.) in the middle of January and even in the mountain zone as Dudh Pokhari, 15,420 feet high, it was no less than −20°C. (−4°F.) at the end of that month. We were shown at Namche Bazar some meteorological notes of last year, though there were no temperature data. In January of last year there was snowfall seven times and the maximum depth of snow reached to 250 cm. (8 feet 2 inches). Because of the lack of the snow, we encountered much difficulty in finding Yeti tracks.

On the other hand, thanks to the scarcity of the snow, we could walk easily through almost all valleys of this area about Namche Bazar. At first we went along Bhote Kosi, and examined especially one of its tributaries, the Langmoche river. As the next step, we went to Khumjung, Thangboche, Pangboche, and Chukhung along Imja Khola, and its tributaries. Some of us reached Lobuja Khola. In the third search, about a half of the members went to Dudh Pokhari, and the other half to Langmoche and Lhenjo. On the 5th of February we left Phurtee with 45 porters, and via Lungbesi we came back to Kathmandu on the 19th of February.

IV. THE ASCENT OF API

YASUSUKE TSUDA

DOSHISHA UNIVERSITY Himalayan Expedition 1960, consisting of Yasusuke Tsuda, leader; Katsutoshi Hirabayashi, deputy leader, Yasushi Egami, Motoh Terasaka, and Takeshi Uenishi left Cal-

cutta on April 1. Sirdar Gyaltsen Norbu, Lhakpa Gyelbu, Ila Tenzing (cook), Dawa Tenzing II, and Temba Tenzing accompanied the party as high altitude Sherpas.

Passing through Tanakpur, Pithoragarh, Jhulaghat, and Garbyang, we established Base Camp at Api Khola at 11,500 feet on April 21. Following the same route taken by Sr. Ghiglione's party in 1954, we established Camp I at 14,750 feet on April 28, and Camp II at 17,400 feet on May 2. The route was the same as Italian party's in 1954, but the condition of ice fall was worse, according to Gyaltsen's opinion. The 2500 feet from Camp II to Camp III were most difficult. After three days of hard work, in which we fixed 1000 feet of rope, the party established Camp III at 19,900 feet on May 5. Camp IV was established at 21,555 feet on May 9 and an attempt to reach the summit was made on May 10 by Hirabayashi and Gyaltsen Norbu in fine weather. They left Camp IV at six A.M. and reached the corniced summit (23,399 feet) at 11:40 A.M. The next day, Terasaka and I reached the summit again as the second summit party.

V. JUGAL HIMAL, 1960

HISAYUKI ITO

IN 1949, Mr. H. W. Tilman explored Lantang Himal and Jugal Himal and introduced their scenic beauties to mountaineers. Then, in 1955, a British women's expedition made a successful ascent of Gyaltzen Peak, and in 1957, another British party made an attack on the main peak (Big White Peak) in vain. This climb was prevented by an avalanche which took three human lives. In 1958, Mr. K. Fukada and his party from Japan explored this area. (*A.A.J.*, 1959, 11:2, pp. 245-246.) The party consisted of the following eight members: Hisayuki Ito, leader; Shoji Iwase, deputy leader, medical doctor; Setsuo Futatsugi, Kunitoshi Ishihara, Yukihiko Kato, Kanenori Haruta, Tsuneo Inagaki, and Eiji Haneda. Sirdar Pasang Phutar I, Dawa Thondup, and seven other Sherpas accompanied the party as high altitude porters.

The purpose of our expedition was to climb the Big White Peak (23,240 feet) which is the highest mountain of the Jugal Himal range and was named by the above British women's expedition. We arrived at Base Camp (14,100 feet) on April 18 and a route was taken leading to Purbichyachu Glacier on which we set up camps, Camp I to Camp V. The support for the attack party was satisfactory and preparation for attack was all ready. But bad weather interrupted us and we were unavoidably compelled to give up attack on the Big White Peak.

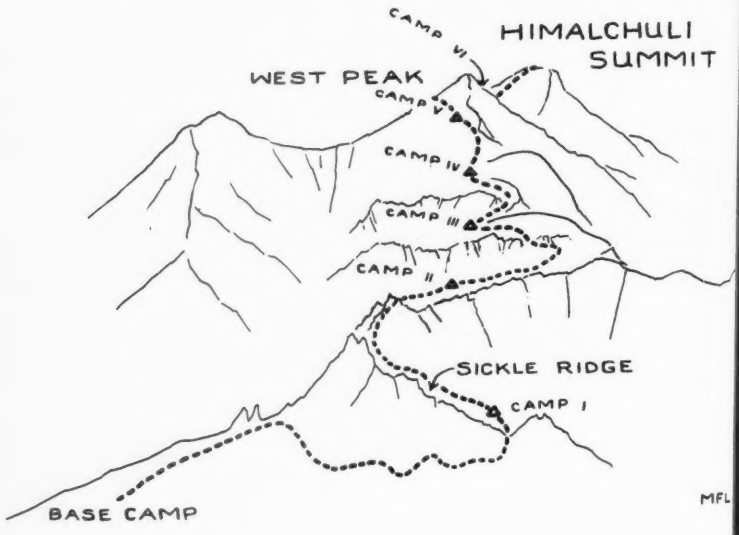
Though we failed to get to the top of Big White Peak, on May 7, Ishihara, Kato, and Pasang Phutar did succeed in climbing from Camp IV to Madiya Peak (22,310 feet) located just in front of the Big White Peak. This peak was named by our party. Madiya means "Central" in Sanskrit. We think this Madiya Peak is a suitable name for such a peak in Jugal Himal, because this peak is located at the innermost part of the Jugal Himal range and at the end of both Purbichyachu and Dorje Lakpa Glaciers. Haruta, Inagaki, and Dawa Thondup made a second ascent of Gyaltzen Peak (22,000 feet) on May 10.

VI. PUNJAB HIMALAYA EXPEDITION

SADAKO HOSOKAWA

THE JAPAN Ladies Alpine Club sent an expedition to the Pir Punjab Range which climbed Deo Tibba (19,687 feet). (First ascent by Mr. and Mrs. Jan de V. Graaff and K. E. Berrill in 1952; second ascent by Rudolf Rott in 1955; third ascent by Eileen Gregory in 1956.—*Editor.*) The party consisted of seven: Mrs. S. Hosokawa, leader; Miss K. Hamanaka, assistant leader; Mrs. M. Okabe and the Misses K. Hara, Y. Sugiura, Y. Okugawa and Nima Lhamu from Darjeeling. On September 5 we arrived at Manali via Mandi from Pathankot, where the Sherpas, Gyaltsen Norbu, Lakpa Tsering, Dawa Thondup, Pasang Dawa and Lakpa Gyelbu, had joined us. We started on an acclimatization trip up to the Rhotang Pass on September 9 and finally left Manali on September 14 with Sherpas, four high altitude porters, 24 coolies and 12 mules, relaying the loads twice because of a lack of coolies. We reached Base Camp at Seri (13,400 feet) in the Jagatsukh Nala on September 18. Four days later we established Camp I at 14,500 feet at the end of the glacier at the head of the Duhangen Nala. On September 24 we set up Camp II across the Duhangen Pass on the Malana Glacier at 16,400 feet, before retiring to Base Camp for a rest. Hamanaka and Okabe left Base Camp on October 1 and arrived the next day at Camp II. The next four days were spent in establishing Camp III. (The meaning of the original manuscript here was a little obscure and although the ridges are clearly indicated in maps and photographs in the *Himalayan Journal* of 1952, the route followed is difficult to identify.—*Editor.*) Piton Ridge, which had been chosen by the Graaff party and by Miss Gregory, was dangerous because of falling ice and so seemed impossible for us. We decided to take a new route to get down off Watershed Ridge and up on the icefall we named "Deo Tibba Glacier" along Piton

Ridge. The whole of October 3 was spent descending the steep wall to Deo Tibba Glacier from Watershed Ridge. On October 6 Camp III was pitched on the icefall at 17,400 feet. Hamanaka and Okabe started from this camp at eight A.M. with the Sherpas Gyaltsen Norbu and Dawa Thondup, got over the icefall and reached the summit at noon. They were back in Camp II at 6:30 P.M. after evacuating Camp III at three and reached Base Camp the next day. We climbed some minor peaks near Deo Tibba. Hosokawa and Okugawa ascended an unnamed peak south of Base Camp, Hosokawa, Hara and Nima Lhamu, an unnamed peak southeast of Base Camp and Hara, Sugiura and Okugawa a peak (16,932 feet) above the Malana Glacier. On October 20 we started the return trip to Manali and to Japan.



New Zealand Andes Expedition, 1960 —Nevado Cayesh

R. MAURICE DAVIS, *New Zealand Alpine Club*

A NUMBER OF NEW ZEALAND expeditions have climbed in the Himalayas and in recent years transport has become available for exploration and climbing parties to visit Antarctica, but until 1960 no expedition had been sent from New Zealand to the Andes. (In 1959, however, the New Zealanders, Tothill, Mackay and the Nelsons, all living in California, visited the Cordillera Blanca and made a number of ascents. See *A.A.J.*, 1960, 12:1, pp. 142-144.—*Editor.*)

The problems of organization were considerable, made more difficult by the distance to our objective and the lack of information here. We are indebted to members of the American Alpine Club and to the Club Andinista Cordillera Blanca, who provided us with photographs and much valuable information. A six-man climbing team was organized under the leadership of Lloyd Warburton with Dr. Lindsay Stewart, Dick Wood, Dal Ryan, Maurice Davis and Lynn Crawford. The early decision to climb in the Cordillera Blanca of Peru was followed by the choice as primary objective of the Nevado Cayesh, a 18,770-foot virgin peak at the head of the Quebrada Quilcayhuanca, a major tributary of the Río Santa into which it flows at Huaraz.

The party assembled in Huaraz on the 24th of June after travelling by diverse routes. Most of the food was shipped from New Zealand; Wood and Crawford accompanied it from Panama to Callao, while the remainder were organizing transport and purchasing a small quantity of food locally. Having had a week of acclimatization at Huaraz, Warburton, Ryan and I left there early on the 26th with twelve well-laden donkeys and that night, in falling snow, established the Base Camp well below the icefalls in the Quebrada Cayesh, the south branch of the Quilcayhuanca. The site of Base Camp was determined by the deteriorating weather, the approach of darkness and the obvious fatigue of the donkeys rather than by a preference for a comfortable, sheltered place with plenty of firewood and a good water

See plates 57, 58, 59, 60.

supply. When the camp was finally laid out the following day in bright sunshine, it was found to have all these attributes but was a half hour's walk from the foot of the mountain. Our Quechua donkey man, Señor Depas, was dismissed and returned to Huaraz with one of his sons and the animals, leaving the elder boy, Jacinto, with us to assist with portering and to act as watchman in our absence from camp. On the second day in Base Camp we discovered that the low quality Peruvian kerosene would not burn in our pressure stoves, and Jacinto was sent to Huaraz for some white petrol. He returned with the petrol and his younger brother, José, for company. We had little option but to add him to the payroll, but his presence was later to prove most valuable, both boys being keen workers and cheery companions. Jacinto brought a note from Huaraz, in which Dr. Stewart told us that Crawford was suffering from congestive heart failure, so common in this area but virtually unknown to New Zealand climbers. (See *A.A.J.*, 1960, 12:1, pp. 189-190 and also elsewhere in the present *A.A.J.—Editor.*) When Warburton and I returned from a brief reconnaissance of the route onto Cayesh, this news caught up with us and we decided to carry on and establish camps despite the reduced strength of the party.

An immediate start was made in carrying stores and equipment to the site of Camp I on the rocks below the névé at the west of Cayesh. Wood arrived up from Huaraz with the news that Crawford had passed the critical stage and was improving but that Dr. Stewart would remain with him for several days. We were relieved by this, particularly when we learned how seriously affected he had been and that his recovery was made only after a supply of oxygen had been obtained from the workshop of a mine in the valley. After three days of strenuous load carrying by the four members of the party and Jacinto, Camp I was established at 15,900 feet. On the first of July, while the others returned to Base, Warburton and I remained here and the following day crossed the névé to reconnoitre the route onto the west face of Cayesh. The first attempt by way of a traverse of a peak northwest of the mountain was unsuccessful; ice and snow in dangerous condition forced a retreat, but sufficient time was left to have a distant look at two possible routes on the face before returning to Camp I, now also occupied by Ryan and Wood, who had brought up more stores and another tent. The next day, Ryan, Wood and I left Camp I to try to get onto the face of the mountain. After cramponing for two and a quarter hours across the névé, this was achieved by crossing the schrund in the corner near the south face of the small subsidiary peak. Then we cut steps

up steep snow to a rock ledge, fixed a 120-foot rope and returned to Camp I.

Warburton, Ryan and I made an early start on the 4th of July to carry the route further. Following the previous day's steps, we were just below the schrund when an avalanche of large lumps of snow hurtled down, striking both Warburton and me. After another half hour of route finding, we were forced to return to camp to nurse our badly bruised ribs. The next day Dr. Stewart joined us in Camp I, having spent several days at Base Camp. Wood returned there to ease a sinus complaint, while Warburton and I were still not fit after the avalanche incident. Crawford was at Huaraz but recovering rapidly. The party was, at this stage, anything but strong, and to make matters worse, a deterioration of the weather became evident. Despite this, on the 6th Stewart and Ryan traversed a ledge southwards low on the face of Cayesh to a prominent rock buttress; then climbing directly up this onto the snow again, at 3:45 they reached the ice cliff just below the ridge at a long shallow depression well south of the summit. They left immediately to return to Camp I. We who watched from the névé were elated but soon, when a snowstorm blocked them from view, our elation gave way to anxiety. The snow eased at 6:30 and an hour later the pair arrived, exhausted but well satisfied with the day's work. The 7th of July was cloudy and cool, but that mattered little, for it was a rest day for all. Though we knew that fresh snow filled our steps, we were still pleased with the prospects.

Ryan and Stewart spent the 8th on the face of the mountain, recutting steps and preparing the route, but after reaching the summit ridge, they again returned after dark to Camp I in heavy snow. We were certain at this stage that it would be necessary to establish a camp high on the mountain for the final assault on the summit. For this purpose and to restock Camp I, another food lift was organized. We resigned ourselves to snowstorms as a daily occurrence and although these continued for another three days, ruling out work higher on the mountain, on the 10th and 11th food dumps were established on the névé. On the 12th, Wood had a bad fall and injured his back when he slipped on ice in the water supply at Camp I. Warburton was resting in Base Camp and because Stewart had contracted an infection, he was unfit for climbing. As the weather had cleared and promised to remain fine, Ryan and I set out from Camp I at three P.M., retrieved the food dumps and set up a camp on the névé near the face of the mountain where an early start could be made to recut the route. Warburton returned to Camp I with Crawford, who had made a complete recovery, and on the 13th we four set out to put in Camp II. With heavy

loads, new snow and much verglas, progress was slow, and much step cutting was required. Warburton and Crawford dumped their loads below the ridge at 3:30 for Ryan and me to carry the remaining distance to the camp site. On their descent, because of a faulty torch, they were forced to cross the big schrund by matchlight and arrived in camp at 11:30 at night. Camp II was pitched in darkness in a depression on the ridge, the only reasonably level area on the mountain.

After a comfortable night, Ryan and I were away at 9:15 on the 14th for the first attempt on the summit ridge. A brief look at the huge, overhanging ice formations on the ridge near the camp made us decide to climb around rather than over them, using the steps of the last part of the ascent to Camp II to gain the west face below the ice cliff. From there, a level traverse northwards below the impressive ice sculpture led to a rocky ridge up which we climbed; with successive traverses below the ice bulges and short ascents we reached a steep snow slope, which allowed us finally to gain the ridge six and a half hours after leaving camp. From this point we returned as rapidly as conditions and fatigue would allow, but did not get back to Camp II until after dark.

With an earlier start the following day we reached the ridge by ten o'clock, then cut steps along a precarious arête leading to a large, rocky tower. After wasting much time in trying to climb this, we had a brief look at a more promising alternative route around the west side of the tower, but at three had to turn back. Ryan lost his ice axe while descending a steep verglas-coated gulley below the ridge and I had to belay him the remainder of the slow climb back to Camp II, which we reached exhausted at 6:15. The loss of the ice axe made it imperative to return to Camp I the next day. As Warburton and Crawford were due to move up to the high camp on the 16th, we left early, meeting the others at the foot of the snow slope for a brief route discussion. While we continued down to Base Camp, Warburton and Crawford climbed to Camp II and spent the day there resting. On the 17th they followed the now well-formed route towards the summit, found a way around the tower and regained the ridge above. With only sufficient daylight left to return to Camp II, they were forced to retreat. Supplies at the camp were now getting so low that on the 18th Warburton and Crawford descended to Camp I, while Ryan and Stewart moved up there from Base Camp. Wood, whose back still bothered him, remained at Base with me. I had traced my trouble to a broken rib. We were joined by Warburton on the 20th, while Ryan, Stewart and Crawford moved up to Camp II. The clear, windless weather gave high hopes for the success of this attempt. Making good time, they carried food

and extra sleeping gear to Camp II. After a 6:45 start the following morning, the 21st, they were at the end of the prepared route by nine. Progress was slow under the large overhanging ice bulges with steep ascents to short, slender arêtes on the ridge.

They are not just sure how many ice bumps they turned and cut around, but finally only two large steps were left to conquer. A short, steep climb, a long, level traverse on hard ice, then another steep climb and all that remained to the summit was a gentle slope over easy snow. This last lap was well photographed but seemed interminable to us as we watched from the valley, passing binoculars rapidly around to five pairs of anxious eyes. Then moving cautiously but steadily, Ryan, Stewart and Crawford moved onto the summit at 4:30 P.M., while the Quechua boys in recognition set fire to a large portion of the slopes of San Juan. In perfectly clear weather the view was superb, but it was late. Since darkness comes quickly in the Cordillera Blanca and with it intense cold, they left the summit after a brief but comprehensive round of photographs. Altitude, with resultant fatigue and the exacting demands of the climb, slowed progress and only a very short distance had been covered when failing light further reduced the pace. On the ascent, they had passed a convenient ice cave and discussed its merits as an overnight shelter. Not far away, it was the only place that offered a comfortable chance of survival. The three men reached it in complete darkness at 6:30, drove an ice piton and lowered themselves over the top lip into the cave. Not unduly cold with all their clothing on, they slept, if somewhat fitfully, though dawn was slow to break. The weather remained fine, and at seven o'clock there was sufficient light to find the previous day's tracks to Camp II, which they reached shortly before noon. After a rest and a meal, they continued on to Camp I, where Warburton awaited them, and on to Base Camp that same night. Having seen the torches coming down the valley, Wood restoked the fire and had another brew of tea ready for their arrival at 10:30. It was a happy occasion, and over cups of tea and large pieces of fruit cake the story of the final assault was shared. A bottle of whisky brought from Invercargill was broached in honour of Cayesh and six very happy men crawled into their sleeping bags in the comfort of Base Camp at half past one in the morning.

The climbers at Base Camp continued for the next two days the work of evacuating the upper camps. On July 25 we left Base Camp for good and turned down the valley, pleased with our success but having no regrets at leaving Cayesh. It had been a long and difficult ascent and we had more than our share of troubles.

As well as Cayesh, we had made two ascents of a peak we called "Condor Peak," southeast of the quebrada, between Cayesh, Huantsán and San Juan. It was climbed by Dr. Stewart with Jacinto on the 16th of July after the former had been recuperating at Base Camp, and on the 18th by Wood and me.

Our return to Huaraz coincided with preparations for the 28th of July Fiesta, which was to be an interesting diversion for the next two days as we again enjoyed the comfort and hospitality of the Hotel Los Pinos with its ever helpful Señor Matellini.

Our next objective was an attempt on the unclimbed east ridge of Nevado Huascarán, 22,205 feet, the highest in Peru. Food for two weeks was sorted out and packed and preparations made for departure. The organizing of transport can be frustrating at any time in this area, but in the joyous aftermath of the fiesta this became so impossible that we waited for a couple of days before getting a truck to transport our equipment and stores to Yungay and thence to the end of the road in the Llanganuco where we waited a day for the donkeys to arrive. In such pleasant surroundings this was not hard to do, but as time was running out, we were anxious to come to grips with Huascarán. We left the Llanganuco (often and less correctly spelled "Yanganuco"—*Editor.*) lakes late on the 31st and set up Base Camp in the dark in the valley between Huascarán and Chopicalqui just above the track over the Llanganuco Pass to Huaripampa. On August 1 we started to pack stores for Camp I, which was occupied that night by Crawford and Stewart, the others returning to Base Camp. Camp I was located at the top of a long ridge leading from the eastern lateral moraine to a bold rock outcrop below the glacier which flows from the saddle between Huascarán and Chopicalqui. The route from Base Camp to Camp I followed the east side of the stream and then went along the trench between the lateral moraine and Chopicalqui to the ridge. A deterioration in the weather with frequent rain, delayed further trips to Camp I with food, but Stewart and Crawford managed a brief reconnaissance. When the weather cleared on the 5th, they moved up to the saddle and there set up Camp II while the others packed equipment to Camp I. Warburton and Ryan remained there overnight to carry on to Camp II on the 6th. Wood and I packed more food to Camp I and in turn stayed there on the 7th, moving on to Camp II on the following day.

Stewart and Crawford left Camp II on the 6th to attempt the east ridge of the south peak of Huascarán. Difficult snow conditions demanded constant step cutting on steep slopes or along slender ridges. The intention was to reconnoitre for a site for Camp III, but both men carried clothing

in readiness for a night out. Because of their strong desire not to have to descend over this route, Stewart decided to press on to the summit and descend to the Quebrada Ulta via the southeast ridge. They spent the night of the 6th sitting on the ridge in the partial shelter of an ice formation. With little to eat and drink in the bitter cold, sleep was almost impossible, and despite the difficulties of the ridge, it was some comfort to be moving again at dawn. What promised at first to be an improvement in the gradient near the shoulder below the summit, proved to be a severely serrated ridge similar to that on Cayesh which demanded continuous step cutting. At two o'clock and about 300 feet below the summit they recognized defeat and began a reluctant retreat. The climbers descended until it was too dark to see the steps and there sat down in the snow to pass another miserable night, whipped by a cold wind and light snow showers. Without food and shivering uncontrollably, they could endure the situation only because their senses were dulled by sheer fatigue. Crawford complained of tight crampon straps, but the effort to relieve them seemed too great. At dawn on the 8th, the descent was continued at a reduced pace, fortunately in still comfortable but cloudy weather.

At Camp II Warburton and Ryan, anxious over the prolonged absence and fearing the worst, set out to climb in search. Wood and I, coming up from Camp I, found Camp II deserted and it was with great relief that shortly after midday we heard an exchange of greetings high on the mountain. Warburton and Ryan assisted the climbers down to Camp II, which they reached at five P.M. Early in the evening Crawford complained of numbness in two of his toes and Dr. Stewart started immediate treatment for frostbite, which continued through the night. A late start was made at both camps the following morning. Crawford was able to walk, though slowly, with his gear carried by the others, and the party was reunited at Base Camp before dark. For the return to the end of the road at the lake in the Llanganuco, we were able to obtain at the hacienda about three miles down the valley six donkeys for the equipment and one for Crawford, whose injuries from frostbite were not as serious as first thought.

Although disappointed at not climbing Huascarán by the new route, we did prove that given time to establish a camp on the ridge, it could have been climbed. Stewart estimated the time required from their highest point to the summit would be five hours. During the 1960 season, conditions in the Cordillera Blanca were not good, neither the weather nor the snow being up to the expected standards, but we all left the Andes very satisfied and most impressed by this grand climbing area.

Summary of Statistics

AREA: Cordillera Blanca, Peru.

ASCENTS:

"Condor Peak," 17,075 feet, July 16, 1960 (Stewart, Jacinto Depas)—first ascent; July 18, 1960 (Wood, Davis).

Nevado Cayesh, 18,770 feet, July 21, 1960 (Ryan, Stewart, Crawford)—first ascent.

ATTEMPTED ASCENT:

Huascarán, 22,205 feet, August 7, 1960 (Stewart, Crawford)—to 21,900 feet on east ridge.

PERSONNEL: Lloyd Warburton, Dr. Lindsay Stewart, Lynn Crawford, R. Maurice Davis, Dalmore Ryan, Richard Wood.

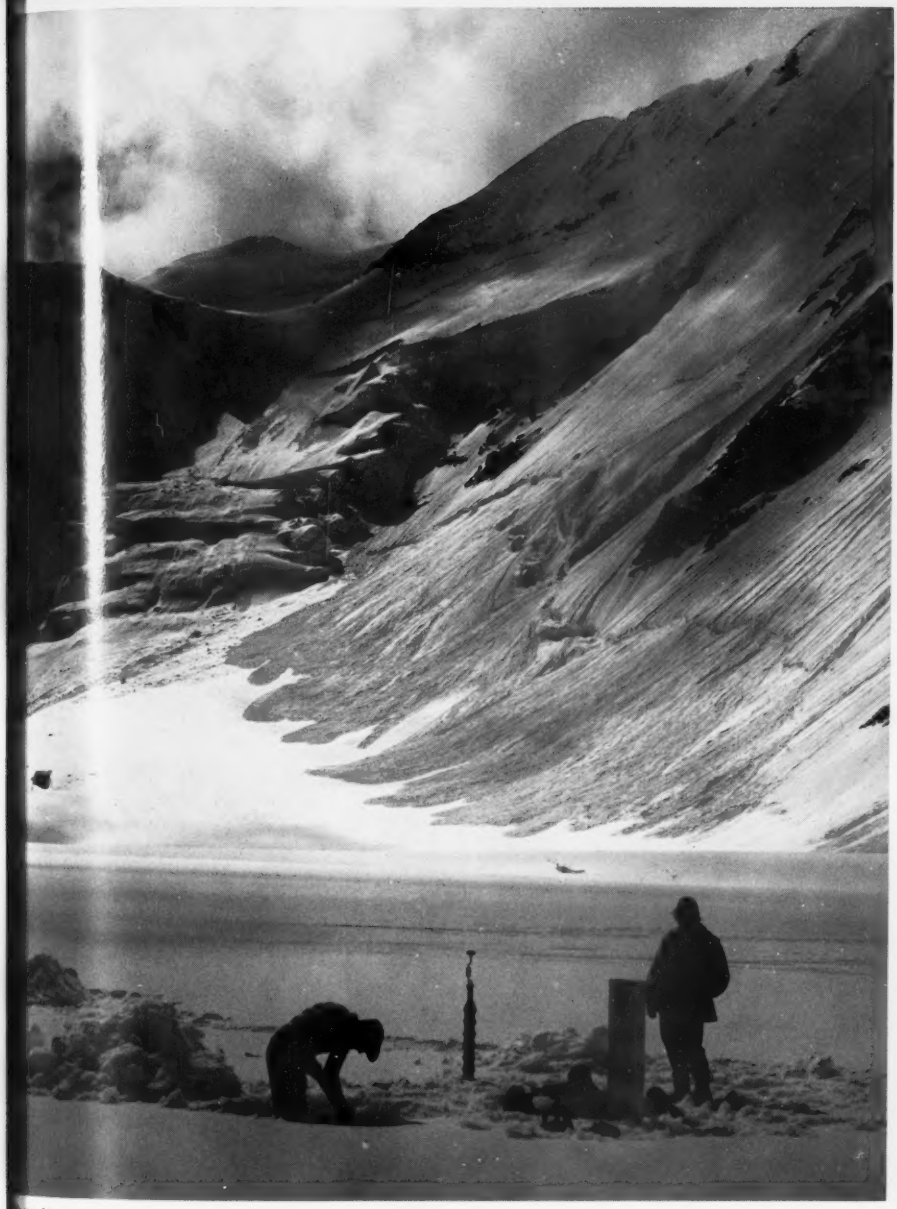


PLATE 39

All photos in this section by H. Adams Carter

NORTH FORK OF ELDRIDGE GLACIER. Drilling for snow core.

PLATE 40

LULL IN STORM.

PLATE 40

LULL IN STORM.

PLATE 41

DESCENT FROM GLACIOLOGICAL STATION.

PLATE 42

OBSERVING GLACIAL MOVEMENT PROFILES.

PLATE 42

OBSERVING GLACIAL MOVEMENT PROFILES.

PLATE 43

BUILDING CAIRN AT GLACIOLOGICAL STATION. "Matterhorn" on right.

PLATE 44

PARTY APPROACHING "MATHERHORN."

PLATE 44

PARTY APPROACHING "MATHERHORN."

PLATE 45

ON ASCENT OF PEAK 9152. "Matherhorn" in background.

PLATE 46

LOWER SUMMIT OF "MATTERHORN."

Milton Mount McKinley Range Expedition

Glaciological Research on the North Fork of the Eldridge Glacier

H. ADAMS CARTER and DAVID L. ATHERTON

"SCIENCE BE HANGED!" I stated flatly, expressing in one terse sentence the sentiments of the *Non-Scientists*. The scene: camp on Alaska's Mount Crillon; the date: mid-July, 1934. However, there was work enough for all. The "silly" *Scientists* continued to measure the rate that the glacier was pushing down into Crillon Lake and played fourth of July all summer by exploding dynamite to see how thick the ice really was. "As if you couldn't see that it's moving fast, with all that ice breaking off into the lake! And what matters is the surface, not the thickness of the ice!" With that we *Non-Scientists* set out back-packing for the next camp at eleven P.M. in order to make a sizable detour by way of a virgin summit before our return to this camp.

* * *

"No climbing yet!" I stated equally firmly. The scene: camp on the north fork of the Eldridge Glacier, 20 miles east of Mount McKinley; the date: late June, 1960. "We didn't get those grants§ to make the first ascent of the "Matterhorn." Besides, that 50° ice slope that leads up to Station Brooks will polish our technique for climbs later."

Such was the metamorphosis of at least one mountaineer. Here we were, undertaking the kind of field research which twenty-six years before I had scorned. In the intervening years I had come to realize the importance of glaciological research and also the essential part that mountaineering plays in it. The scientific work gives the mountaineer an additional useful purpose. On the other hand, the non-mountaineering scientist simply can not operate safely and successfully in many mountainous regions. It would be hazardous for him to climb to high observation points up precipitous slopes or to cross heavily crevassed glaciers without either a knowledge of climbing techniques or a mountaineer to guide him. All the members

§ Grants-in-aid were generously provided by the Arthur Gilkey Research Fund of the American Alpine Club, by the Mount Everest Foundation and by the Harvard Travellers Club. Glaciological and surveying instruments were lent by the U. S. Army's SIPRE and by the American Geographical Society. Our scientific sponsor was the American Alpine Club.

LOWER SUMMIT OF "MATTERHORN."

PLATE 46

of the Milton Mount McKinley Range Expedition, to a greater or lesser extent, combined both scientific and mountaineering interests. We were all anxious to carry out the glaciological program and at the same time we wanted to climb some of the towering peaks about us. Our scientific leader was David Atherton, veteran of Cambridge University glaciological expeditions to Iceland and Greenland. To balance him, our other Englishman, Brian Wilson, had his degree in physics from *Oxford*. He had come as an exchange master from Clifton College to Milton Academy with the secret resolve to visit the Alaska Range before returning to England. Equally well set off against each other were our undergraduate members, *Harvard's* Nat Goodhue and *Yale's* Doug Bingham. The latter, our skilled radio operator, was returning with me to the McKinley region for the third time. Tom Bisbee and I, both schoolmasters at Milton Academy, completed the roster.

On June 27 Don Sheldon landed us one by one in his Piper Super Cub at 6500 feet in the upper basin of the Eldridge Glacier not far from our Icefall Camp of 1958. (See *A.A.J.*, 1959, 11:2, pp. 201-7.) Next morning David and I were climbing onto a knife-edged snow ridge above the ice slope to reoccupy Station Brooks. "What a chute down into the icefall that would be," said David. "And how can you talk about a station on bed rock on the ridge top? The only rock here is where the slope is too steep to hold snow." Perplexed, I scanned the ridge. "It should be right here," I answered and just at that moment caught sight of a wooden peg emerging an inch above the surface. This top inch of our four-foot survey stake which rose out of the huge cairn on the wind-swept ridge gave us our first proof of how much snow had piled up in this region since we had been there two years before. This had been a rock ridge, but the snowfall during the last two years had greatly exceeded the amount that could melt off it during the short summer. A quick glance at our previous photographic panoramas confirmed our suspicions that the whole snow level on the glacier was appreciably higher. Everywhere rock outcrops had either diminished or disappeared altogether. The peak across the way could now best be climbed without touching rock on what two years before had been a rock ridge.

Except for one day, whenever the weather was even passable for the next three weeks, we worked hard on our glaciological studies. We set up lines of stakes across the glacier and measured its rate and type of flow; we drilled and studied snow cores down to depths of 50 feet; we laboriously dug snow pits to observe the snow and took its specific gravity and temperature; we trekked over 20 miles down the glacier to the junction

of the main Eldridge to study an ice-dammed lake; we duplicated dozens of photographs to show changes in icefalls and in snow and ice cover; we investigated wave ogives in icefalls. Much of this involved mountaineering problems, but we fell into none of the gaping crevasses in the icefalls nor plunged down any ice slopes, although I cut my fingers to the bone when a handful of slate came out on a steep rock slope. Anyone who does not avoid the frost-shattered stuff that masquerades as rock in the region needs his head examined. But permanent stations must be on bed rock and you have to climb to them. So much for this aspect, as it is well covered by the glaciological note which follows.

Pure mountaineering as such occupied only three days. On one day, still 1000 feet below the summit of a 9000-foot peak, we beat an ignominious retreat and rappelled back down the ice slope and over the bergschrund when it appeared that a foot of slush, with blue ice beneath it, was ready to avalanche off the steep slopes directly above us. On the other two days we reached our summits. On July 3 we left camp at three A.M., heading for what we had long called the "Matherhorn"; this is the higher of two 11,000-foot peaks that lie east of Mount Mather and are connected to it by a ridge. We wound our way up the basin past enormous crevasses towards Mather's northeast face. My diary reads as follows: "As we approached what appeared to be an unbroken wall festooned with séracs, the slope increased. Crust gave way to wind-blown powder. Then, as we climbed, the hidden valley between Mather and the "Matherhorn" gradually opened. The peaks above looked as if some giant child had tried to plaster the precipitous walls but lacked the skill to do more than to gob the snow on in colossal ice blocks. The only place that I have ever seen that looks more like the Cordillera Blanca is that range itself. While we crossed swaths of fallen avalanche blocks, we looked anxiously up at others still precariously in place that seemed to hang a thousand feet or more right over our heads." Snow conditions were ideal as we cramponed up the ever steepening headwall to the col between Mather and our peak. On the far side of the col, the cliffs dropped to a sickening hole, where lay the head of the main Eldridge Glacier. Clouds scudded in and out among the seemingly unclimbable peaks which surrounded it. Above us, our heavily corniced ridge looked short but spectacular. Well out on the hidden valley side and away from the cornice, we made quick work of the remaining 500 feet. Once on top, we had a rude shock. The ridge dropped off for some 750 feet into a wide col or really a plateau from the far side of which rose a second peak, just a few feet higher than where we stood. Though the clouds were piling in thicker and thicker,

we headed down the ridge, across the plateau and up the steep face on the far side. As we sat on the summit, the clouds reassuringly opened to let us see that we sat on the highest point. A traverse down a steep face let us descend into the hidden valley.

On July 17 we climbed Peak 9152, 4½ miles northeast of Mather and the last of the major summits on the Muldrow-Eldridge divide between Mount Mather and Anderson Pass to be climbed. (Only a month later the second ascent was made from the Muldrow side as will be seen elsewhere in this Journal.) We approached the mountain up a glacier that heads up in a cirque on its western face, gained the southwestern ridge on the right and climbed on steep but excellent snow in a high, blustery wind. The fleeting clouds continued to play hide and seek, and we wondered whether this was our day. As we neared the summit, the ridge emerged from the mists. Since the ice we had seen gleaming from below was only on the surface, we kicked or cut easily into the firm snow under it. Finally, perched on the summit, a long, slightly corniced ridge, we gloried in the only perfect weather of the day and absorbed a most fantastic panorama. To the east, McKinley rose majestically over the *summit* of Peak 10,200. Mather dominated our glacier along with the "Matterhorn" and the other 11,000er. Everywhere but in the distant plains to the north lay a maze of steep, jagged, glistening snow spires, except where they were cut by the ribbon-candy stripes of the Muldrow Glacier and the north fork of the Eldridge far below us. We traversed along the far side of the summit and climbed down the northeast ridge and over a second summit before we dropped down a steep slope back to the cirque and to camp.

Our weather was not particularly favorable when viewed as a whole. Clouds and storms prevented any work on nineteen of the thirty-seven days we were in the field. However, we did manage to work on all but seven of the first twenty-five days. It was during the last twelve that it stormed incessantly.

Thus possibly can mountaineers thoroughly enjoy themselves and at the same time, under the guidance of a trained glaciologist, make their little contribution to science. A summary of the glaciological work follows.

H. A. C.

Glaciological Note

The scientific work of the expedition was, of course, somewhat hampered by poor weather; in particular, higher altitude firn investigations and a short trip to the upper main Eldridge Glacier had to be abandoned. However, despite the uncertainties of the daily gamble as to whether the

conditions would clear and hold sufficiently for us to observe if we climbed to our station, we were very lucky in our guesses and were able to make good use of the weather that we actually had.

Meteorological observations were made at our camp at 6500 feet. These results supported the theory that the main accumulation period in this region is during the autumn and that the winter, though cold, produces comparatively little precipitation. Local conditions have an unusually big effect on the weather as was strikingly demonstrated to us one day when we observed above us, clouds at different altitudes travelling in three different directions.

Measurements of firn temperatures were all very close to the freezing point indicating that, despite its location, the glacier was of the temperate alpine type rather than the cold polar type. This was explained as being produced by the small winter precipitation and the winter cold wave being later destroyed by the summer ablation prior to the next accumulation season. This type of summer accumulation pattern is particularly susceptible to small climatic variations which may produce big variations in the annual accumulation by altering the proportions of the precipitation occurring as rain or as snow.

Velocity profiles were observed which gave a maximum velocity of 600 feet per annum. There was considerable slip at the edges of the glacier which is in accordance with the high velocity to width ratio of 1:6.

Examination of firn stratification was difficult on account of the numerous ice bands that are formed during the accumulation period; however, numerous holes were drilled and cores examined. Correlations were obtained and annual layers estimated and these appeared to correlate with the meteorological records for the region. Annual precipitation was found to vary widely with an approximate mean of 20 inches of water. It is suggested that these large variations in precipitation, which have a tendency to form groups of "lean" and "fat" years, might be sufficient to initiate the rapid advance of a potentially unstable glacier.

A wave ogive system, emanating from a cwm glacier by camp, was examined, being of particular interest as it was completely above the firn line. The cwm was fed by avalanche slopes and it is probable that there are considerable seasonal fluctuations in its outflow and that the variations produce the waves which appear to be of the simple annual type.

Comparison of reference photographs with those taken on the reconnaissance expedition showed that in the higher parts of the collecting zone there had been considerable recent increase in the ice and snow coverage. Examination of the glacier itself led to the conclusion that, despite wasting

of the lower tributary glaciers, the main north fork was in a comparatively healthy condition. In the case of a high altitude glacier system of this type climatic amelioration accompanied by increased precipitation would generally favour initially an advance of the glacier.

A very interesting investigation was made of an ice-dammed lake near the junction of the north fork of the Eldridge with the main Eldridge glacier. The lake has a system of small raised beaches for 350 feet above its low summer level caused by the periodic filling and emptying of the lake, which is drained by a river alternating between a channel over the ice beside the lateral moraine and a sub glacial tunnel. These provide an indication of the glacial history over the last two hundred years or so and suggest that the glacier is at present not far from its maximum height. Incidentally, the repeated reversion of the river to the sub-glacial tunnel is strong evidence for the tunnel being reformed each time in the same course so that an esker may be in the process of formation beneath the glacier.

The scientific report of the expedition's field work has been submitted for publication in the *Journal of Glaciology*.

D. L. A.

Summary of Statistics

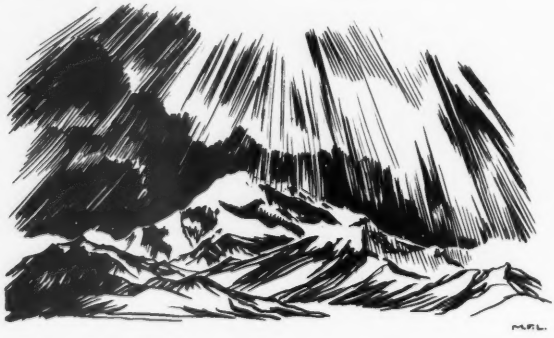
AREA: North fork of Eldridge Glacier, Alaska Range.

ASCENTS:

"Matterhorn," 11,000 feet, July 3, 1960 (whole party)—first ascent.

Peak 9152, July 17, 1960 (whole party)—first ascent.

PERSONNEL: H. Adams Carter, leader; David L. Atherton, scientific director; Douglas K. Bingham, Thomas Bisbee, Nathaniel M. Goodhue, Jr., Brian J. Wilson.



The First Ascent of the Diamond, East Face of Longs Peak

DAVID REARICK, *Sierra Club*

LONGS PEAK, in Rocky Mountain National Park, is one of the best-known and most-climbed mountains in the United States. At 14,255 feet it is Colorado's northernmost "fourteener," and its rugged lines and dominant position have attracted mountain climbers for almost a century. Seen from the east, the peak presents a precipitous granite face of some 1800 feet on which, in past years, a great number of climbing routes have been established. In the upper center part of the face is a diamond-shaped area, roughly 1000 feet high and 1000 feet wide, which is relatively unbroken and of exceptionally high angle. During the past decade it has been the subject of much speculation among climbing circles and has acquired the name, the Diamond. In 1953 a party organized by Dale Johnson of Boulder announced its intention of attempting an ascent of this wall, but was refused permission by the National Park. Since then the Diamond has been "off limits" to climbers. Being thus protected from the climbing activity going on elsewhere in the country, it gradually assumed the distinction of being the most famous unclimbed wall in the United States.

It was therefore with considerable excitement that Bob Kamps and I read the letter giving us permission for "an attempted ascent of the Diamond during the month of August, 1960." We knew we were well prepared for the climb, coming fresh from a month's practice in Yosemite Valley. We had become acclimatized to Colorado's high altitude by climbing the Diagonal, a fine route located just below the Diamond, pioneered by Ray Northcutt and Layton Kor. (*A.A.J.*, 1960, 12:1, pp. 129-130.) We had an active and able support party consisting of Jack Laughlin, Gary Cole, Charles Alexander and Charles Roskosz, who, in case of emergency, would be aided by the Alpine Rescue Team of Evergreen, Colorado. We had the latest in chrome-moly hardware, made by Yvon Chouinard. Now all we

See plates 61 and 62.

needed was endurance, both physical and psychological, luck with the rock, and most of all, luck with the weather.

The afternoon of July 31 found Bob and me and the support party laboriously carrying our gear up the North Chimney to Broadway, a wide ledge forming the lower boundary of the Diamond. A steady drizzle prompted us to return to the snug comfort of the Chasm Lake shelter hut rather than spend the first night on Broadway, as we had planned. The grim aspect of the Diamond looming over us, veiled in clouds and weeping streams of water, did little for our morale.

The next morning, August 1, was windy but clear and our spirits rose as we trudged back up the talus slopes. Fixed lines in the North Chimney, placed the day before, enabled us to ascend quickly to Broadway. At about 9:30, while the support party was still moving our bivouac gear across a tricky traverse, Bob and I started the climb. We intended to follow a direct line up the center of the Diamond, along a vertical crack which is discernible most of the way and becomes a chimney near the top.

Leaving Broadway, our route first led up a rounded buttress where a series of firm blocks permitted easy free climbing. I stopped after running out our 150-foot rope and Bob took the second lead. He encountered increasingly difficult face climbing, about 5.6 on the decimal scale, as he approached the "first roof," an overhang slanting to the right. Placing a couple of direct aid pitons under the roof, he reached a comfortable belay ledge. I then continued up the overhang, using direct aid, and followed an easier section back slightly to the left, reaching a grassy platform with a large boulder. This was to be the only really commodious belay stance on the entire climb.

Feeling the patter of water drops, I looked upward apprehensively. They came, not from the clouds which were already gathering over the peak again, but from a waterfall which was plunging free from our chimney far above and splashing on the rock about 100 feet above where I stood. This proved that some 400 feet of the route ahead would be slightly overhanging.

As Bob climbed up to join me, our support party called good-by to us from Broadway and disappeared from sight down the North Chimney. Bob refused to be discouraged by the ominous sight above, and attacked the next section without delay. Thirty feet of difficult free climbing gave way to direct aid as the "second roof," a prominent six-foot overhang, was approached. Bob surmounted this with a single piton and passed from my sight. He found no good stance and was forced to set up a belay partly in slings. Since the pitons were poor, he placed a bolt for reinforcement.

By the time I had removed the hardware from this pitch and joined Bob, the weather was becoming very threatening. At this point we were at the lower edge of the water-washed area, and perhaps 80 feet below the large sloping shelf known as the Ramp. After making a few more feet of upward progress, we decided to descend to Broadway to avoid being soaked by the impending storm. This we did in three rappels, leaving the ropes in place behind us.

Soon after we reached Broadway the clouds began to clear away, much to our chagrin since it was only four P.M. Our support party had prepared a level area for our bivouac, protected by a small overhang. We snuggled into the luxury of sleeping bags and down jackets and spent the evening eating salami, raisins and candy, and watching a spectacular lightning display out over the Great Plains.

Early the next morning, when the face was glowing orange in the sunrise, we ascended our ropes by hand and by prusik loop to our previous high point. After struggling up a wide crack, filled with grass nurtured by the waterfall, I reached the Ramp. Here all was dry, being about 20 feet behind the falling water. The Ramp has an unpleasant outward slope of 40°, and there is only one spot where a belayer can stand comfortably. I pulled up the pack with our bivouac gear and Bob followed without delay, glad to get out of the water.

At this point we noticed a pronounced change in the rock. The granite in the middle section of the Diamond turned out to be of a loose, fractured nature, and often our pitons were somewhat shaky. The central crack, which we were following, now proved to be a sort of slot filled with irregular blocks. For the next several hundred feet the climbing would be largely direct-aid, overhanging, and quite strenuous. The rope moved very slowly now through my hands as Bob labored upward. From my position on the Ramp, I could see a group of spectators watching us from Chasm View, an overlook point on the ordinary route. Isolated watchers and photographers could be seen at various spots along the ridge leading northeast to Mount Lady Washington, and around Chasm Lake far below. Occasionally the crackle of a Park Service radio echoed across from Chasm View. The hauling line running down to me swung gently to and fro, hanging several feet clear of the wall.

Bob stopped after 120 feet and arranged a belay, standing partly in slings. Again a bolt was necessary for security. I followed, collecting the hardware, and led on past Bob's uncomfortable position. My objective was a small ledge which we knew was about 110 feet higher. About 20 feet below the ledge the crack changed into a tight chimney in which free

climbing was possible. The ledge turned out to be perfectly flat and level, about 22 inches wide and perhaps 7 feet long. When Bob arrived, we placed a bolt in the crackless wall behind it, and then pulled up the pack from its resting place on the Ramp, two rope-lengths below. It did not touch rock all the way up.

By now it was about four P.M., and Bob started on the next section without delay. This pitch contained the hardest direct-aid climbing we encountered, probably about a 6.7 decimal rating, and the rock was the most overhanging here. Bob made 90 or 100 feet before evening and placed a bolt in the not-too-sound rock. Leaving a rope tied to it, he backed down his ladder of pitons, removing them on the way.

Back on the ledge it was getting cold, and we put on all our clothes, ate some food, and tied in for the night. I sat in a cross-legged position all night, while Bob was able to recline partially. The night was clear and we watched the shadows from the moon creep stealthily along the slope of Lady Washington below us and across the shimmering blackness of Chasm Lake. We both managed to doze for a few hours. Since the temperature stayed above freezing, the waterfall continued all night, occasionally splashing us. The altitude at this point was about 13,700 feet.

When the sun rose over the plains the third day we could see that a number of spectators had already reassembled at their stations. After stretching the stiffness out of my bones, I prusiked up the line Bob had fixed, dangling out from the rock, and continued on to the point where our route crossed a prominent horizontal crack running across the upper part of the Diamond. Here a small cave gave an adequate though cramped belay stance.

Bob followed through and started on up the central crack; this was now widening into a chimney but was unfortunately blocked by overhanging, mossy chockstones. The waterfall emanated from the lip of one of these. It appeared easier to climb the wall on the left, using direct aid in cracks which now seemed to take pitons very well. In the absence of any ledges, Bob had to nail himself in to the wall and belay in slings; a more exposed position is hard to imagine.

By this time we were getting anxious to finish off the climb, particularly since storm clouds were once again drifting over the peak. I climbed past Bob's anchor position and continued nailing up the wall, which had ceased to be overhanging but was still vertical. After about 60 feet, I was able to get back inside the chimney. From this point it appeared that free climbing would be possible. Bob left his uncomfortable stance without delay and climbed past me about 20 feet to a small platform in the

chimney. At this vantage point we pulled up the pack, which had been waiting patiently in the cave two pitches below, and straightened out the tangle of our four ropes.

The final pitch deep inside the chimney was not difficult but was partially obstructed by several huge blocks of ice, whose melting generated the 400-foot waterfall below. At one point I remember doing a layback against a block of ice. Nevertheless, the top was reached in short order and by 1:30 P.M. on August 3, Bob and I and the pack were reunited with our companions, including Bob's wife Bonnie, who had all climbed the peak to meet us. A melodramatic touch was added by a brief hailstorm which broke just at that moment.

The actual summit of Longs Peak still lay 200 feet above us and, leaving our friends with all our baggage, we scrambled on up to sign the register. Several hardy newspaper reporters were on hand at the summit, and as we descended the regular route, we met others who had been defeated by the altitude at various levels. The extensive newspaper coverage of our climb, and the dizzy aftermath of parades, banquets and television appearances, showed the enthusiasm of Coloradans for mountain-climbing and confirmed the exalted reputation of the Diamond.

We owe a special note of thanks to Jack Laughlin, who forsook the celebrations and spent another day removing the fixed ropes and retrieving our equipment left on Broadway. This climb required the active participation of the support party, and we are indebted to all of them.

In retrospect, the climb turned out to be somewhat harder than we had expected, because of the difficult rock in the central section. We never resorted to bolting for direct aid, our four expansion bolts being used only to anchor belays and prusik ropes. On the whole we were favored by the weather, which is undoubtedly the largest single factor in any climb on Longs Peak. A retreat down the overhanging sections would have been difficult, particularly under storm conditions. Climbing the Diamond will always be a serious undertaking, and I doubt if there will ever come a time when climbers will cease to be impressed by this great wall.

Summary of Statistics

AREA: Longs Peak, Colorado.

ASCENT: First ascent of the Diamond, August 1 to 3, 1960 (Kamps, Rearick).

PERSONNEL: Robert Kamps, David Rearick; support party: John Laughlin, Gary Cole, Charles Alexander, Charles Roskosz.

The North Face of Mount Baring

FRED BECKEY *and* EDWARD COOPER

OF THE MANY sheer mountain walls in the Cascades, those near an existing highway are bound to attract the most attention, and when one remains unclimbed after several attempts, it soon gains a ponderous reputation.

The north and east faces of Mount Baring are notoriously impressive from the Stevens Pass Highway and from Barclay Lake. While it is not known when the first serious attempt was made to scale Baring from the faces above the lake, it is doubtful whether an earnest effort probed any distance until 1951 when Pete Schoening and Richard Berge made two attempts to place a route up the 3500-foot high north face. To their credit is the establishment of the route up the cliffy lower section and the conquest of the first two of the final steps; the location of the route has not materially been improved by those who followed. Heat and lack of time ended their attempt at the left end of a difficult traverse on the third step, an area that remained the high point until the face was climbed in 1960.

Another party in 1951, composed of Don Gordon (Claunch), Dave Collins, and Paul Salness, spent much effort in packing camp loads about halfway up the face but did not reach the final steps. In 1952, Richard Berge, Tom Miller and Fred Beckey hoped to make the climb in a weekend and packed a bivouac load to the top of the first step. Because of the oncome of sudden bad weather, the party decided to retreat and found itself, amid darkness and fog in the cliffy forested area just above the lake. It was here that Richard Berge slipped to his death off a cliff beneath a steep forest slope in a most unusual and very unfortunate tragedy. It was an accident that pointed up the treachery of this mountain; certainly Baring will always be a monument to his skill, daring and sportsmanship.

There were no more known attempts on the face until 1956 when Pete Schoening and Don Gordon made a climb on the face and finally reached the high point of previous attempts. John Rupley and Gordon went no higher than the top of the first step in 1957, thwarted by lack of water and extreme heat. In 1959 Don Gordon, Fred Beckey and Ed Cooper

See plate 63.

bivouacked on the first step and again reached the high point, where a bolt was finally placed in the unusually hard rock. Lack of time and extreme heat kept the party from continuing attempts that summer.

F. B.

Several factors contributed to the defeat of all the parties that preceded us. First, the lower 2000 feet of the face consists of fiendish brush fighting up steep cliffs, through slide alder, vine maple, devils club and other varieties which often make the approach to Cascade peaks more difficult than the actual climb. This brush had an exhausting and demoralizing effect on previous parties even before the technical portion of the route was reached. Weather, another factor, during some summers on this side of the Cascades does not stabilize. Because of its eastern exposure, the face becomes like an oven in the late morning. More than one party has suffered greatly from thirst and was, in part, defeated because of it. Lastly, and what concerned us most, since we could plan for the first three problems, was the unusually hard rock on the last part of the face. The efforts of four previous parties attempting to place bolts had resulted in only one 3/16-inch bolt being set, which was, moreover, unreliable.

The following is a rough description of the route. The first 1000 feet are up a steep forested and brushy hillside to Couloir Camp. The next 1300 feet consist of two precipitous parallel ribs of cliffs and brush separated by a large couloir that contains snow often as late as August. The left rib is followed until it fades into another rib further to the left, from the top of which rib a right traverse on ledges brings one to the base of the first step. At this point, one is back on and directly above the original right rib. From here, four vertical steps of 300, 400, 220 and 250 feet, separated by spacious ledges, lead to the summit. These steps require constant grade V and VI climbing.

The highest point on the peak, reached by three previous parties, was sixty feet up the third step. They had traversed for seventy feet upwards to the left under an overhang, then for twenty feet back to the right, resulting in ninety feet of rope out but only sixty feet of altitude gained. This is significant as the next reasonable belay ledge (not visible from below) is sixty feet higher. Piton cracks virtually disappear, and it was here that the solitary bolt was placed after considerable effort.

This was the situation as of early June this year. A council of war was held, and we decided that only an all-out siege operation could assure a successful ascent. We started by cutting a complete trail through the brushy cliffs of the first 2300 feet, which would make it easier and safer carrying heavy loads. Yellow trail markers were used, and hundreds of feet of 1/4-

inch rope were hung from the brush on this exposed and dangerous section. Various lengths of full width nylon climbing ropes were used at several particularly bad places. Don Gordon, Fred Beckey and I spent from four to six days, on weekends and other free days, preparing the lower part of the route. We were fortunate in securing the help of Ron Priebe who helped carry sixty pound loads to Couloir Camp 1000 feet above the lake, and Ron Niccoli who helped in the arduous task of hauling loads by rope to the top of the airy and difficult first step. Double fixed ropes were placed on this step.

Our cache at Dolomite Camp, the top of the first step, now included tarps, sleeping bags, a stove, gas, ten climbing ropes, hardware, and a five-day supply of food. A nearby patch of snow assured us of a water supply, and for storage we had brought many water bags. This is a very spectacular camp spot; the view westward was overpowering, across the precipitous northern ramparts of our peak toward the towering peaks of Gunn and Merchant, rising high out of the velvet depths of the valley.

On July 9, Fred, Don and I started up on what we hoped would be the final assault. We reached the top of the first step by prusiking up the fixed ropes, and it was almost dark as we set up camp. Fred continued on, gracefully mastering the first half of the second step and put in a fixed line, returning to camp in the darkness. The next day, Sunday, we reached the high point of the previous attempts, after making the difficult traverse under the overhang. Fred spent four hours at this one point trying to drill a hole for a bolt. Results were very discouraging as only one 1/4-inch bolt, its hole partially spalled, was placed. This was only possible because the hole of a 3/16-inch bolt, which had popped out, was enlarged after breaking several drills. Don spent another two hours on a hole Fred had worked on but got nowhere. This was the low point of the climb as it appeared there was still another sixty feet of similar going above.

The next morning, Fred left in a very downcast mood, as he had to return to work. It looked as if it might take all summer, at this rate, to get enough bolts in to progress beyond this one spot. However, before he left, he told us both to go ahead and climb it if we could. We decided to stick with it at least one more day.

After several more hours drilling the next morning, and abandoning all hope of further progress by bolts, I managed to place a chrome-moly knife-blade piton. Not much progress, but it gave me confidence to place a wafer, a spoon, and an angle in a vertical flake, none of which I dared put full weight on. Although I was now ready to give up the attempt at Don's first suggestion, neither of us expressed our thoughts, and so Don

prusiked up the knife-blade after my descent. To my horror, he stood on my pitons, and although one and a stirrup came crashing down, Don miraculously managed to place a good piton while standing on a high stirrup rung. We were now on our way. Another good piton, then a second chrome-moly led to some fair piton cracks. After some twenty feet of extremely delicate, exposed climbing, we returned to Dolomite Camp. Without these special knife-blade pitons, which Fred had secured from Chouinard, the ascent of the face of Baring could not have been done.

The next day the weather started to deteriorate, but we started anyway. Prusiking back up was hard work. Don continued the lead of vertical, extremely delicate climbing while I belayed from some one hundred feet below. Standing on a sling which hung from an insecure knife-blade piton, he pendulumed across a blank vertical wall to a groove on the left and then climbed fifteen feet up the smooth groove without adequate protection. He finally worked his way to a good belay ledge. I followed and removed the pitons. We rapelled down, leaving the rope there for the next day.

On Wednesday morning we prusiked up into the fog and questionable looking weather to our high point. I led over a 120° roof, using stirrups, and then up a long vertical dihedral which accepted pitons reasonably. As I approached the branch tips of the scrub firs overhanging the top of the third step, I could see the dream of the last three years coming true. I was just able to touch them—next I could pull myself up on them—then 300 feet of scrambling and the north face of Baring, the climb Don and I had wanted so badly, was after five days on the face below our feet. After we had signed the register, we began the tricky descent, which involved long rappels down the upper walls. It is fortunate that most of the time we were enveloped in dense fog which hid from us the awful drops into the valley below.

This climb gave us more satisfaction than any other climb in many years. We had alternated between hope and despair, from the depths of depression to the heights of sublimity. There may be more difficult climbs, but there will never be another north face of Baring.

E. C.

Summary of Statistics

AREA: Cascades, Washington.

ASCENT: First ascent of the north face of Mount Baring (6200 feet), July 9 to 13, 1960.

PERSONNEL: Don Gordon (Claunch) and Edward Cooper completed the climb. Fred Beckey was also a member of the final team. Members of preliminary team; Ron Priebe and Ron Niccoli.

The Logan Mountains, 1960

WILLIAM J. BUCKINGHAM

THE INTERIOR of the Yukon Territory and the western portion of the Northwest Territory of Canada is a vast wilderness studded with mountain ranges, few of which have attracted much attention in climbing circles. No doubt this neglect has been due to the inaccessibility of these mountains, the lack of knowledge about them, and their comparatively low altitudes. The one area that has seen a certain amount of mountaineering activity is the Logan Mountains. The name "Logan Mountains" is used generally to refer to the rather loosely connected ranges which lie along and just to the east of the Yukon-Northwest Territory boundary, between the headwaters of the South Nahanni and Frances Rivers. The area of greatest interest centers about Brintnell Lake, extending about 25 miles to the north and 50 miles to the south of it. This portion of the range is essentially a vast, spectacularly glaciated, granite batholith. Metamorphic and sedimentary rocks occur in a few scattered locations and form a few important groups of peaks. The mountains support a multitude of small remnant glaciers, and there are several extensive icefields. Most of the peaks are between 8000 and 9000 feet high, but the relief is great—over 6000 feet above the main valleys; timberline generally occurs at about 3500 feet.

The earliest detailed exploration of the Logan Mountains was done by the Harry M. Snyder Expedition in 1937. They traveled up the South Nahanni to Virginia Falls by boat and then by airplane to Brintnell Lake, where they undertook a preliminary survey of the areas near the lake. They ascended a few minor eminences in the course of this work but attempted no significant peaks. In 1952 the Yale Logan Expedition was landed at Brintnell Lake; they explored much of the country between the Brintnell River and the Fish Kettle River. During the course of their explorations they climbed nine peaks, mostly around the head of the Fool's River. The third major expedition to enter the area was in 1955. Their activities centered mainly around the great icefields forming the source of the Brintnell River and the spectacular cirques on the north side of the Brintnell valley. They succeeded in climbing eighteen summits, including Mount Sir James MacBrien, the highest peak in the vicinity of Brintnell Lake. (See *A.A.J.*, 1956, 10:1, pp. 81-89.)

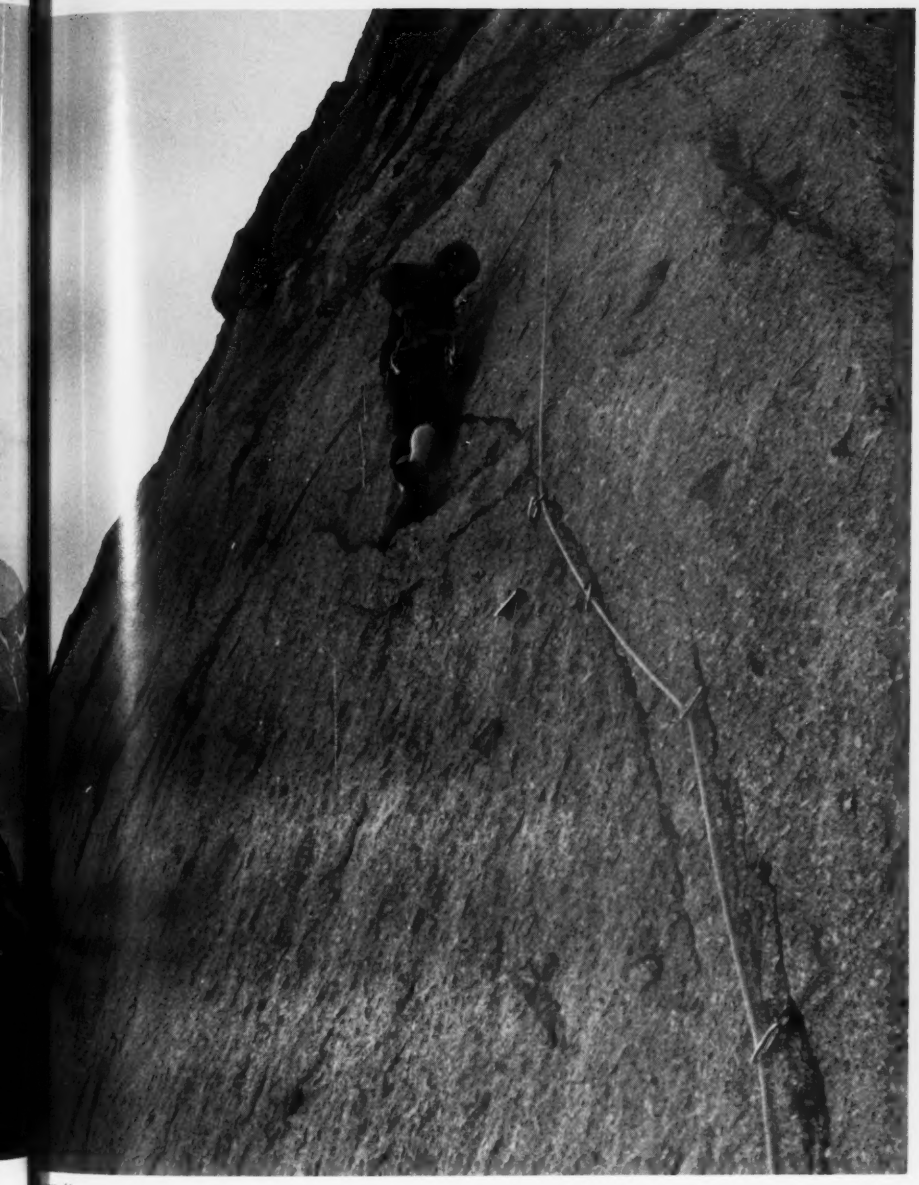
PLATE 47

First seven photos in this section by Stuart Krebs

"PROBOSCIS" AND "FLATTOP" from "Phenocryst Spire."

PLATE 48

"PROBOSCIS" FROM "MOUNT CONTACT." Route is on ridge facing.



TE 49

SHEPARD ON DIRECT-AID PITCH on third step of south ridge of "Proboscis."

PLATE 50

"WEST CATHEDRAL PEAK" from "Mount Meringue." "What Notch" is little ol on right above steep snow.

E 51

"EISSPITZE" from "Mandible Peak." Route ascended lower diagonal snow shelf to ice sheet in center of north face to lower peak and thence along ridge to summit.

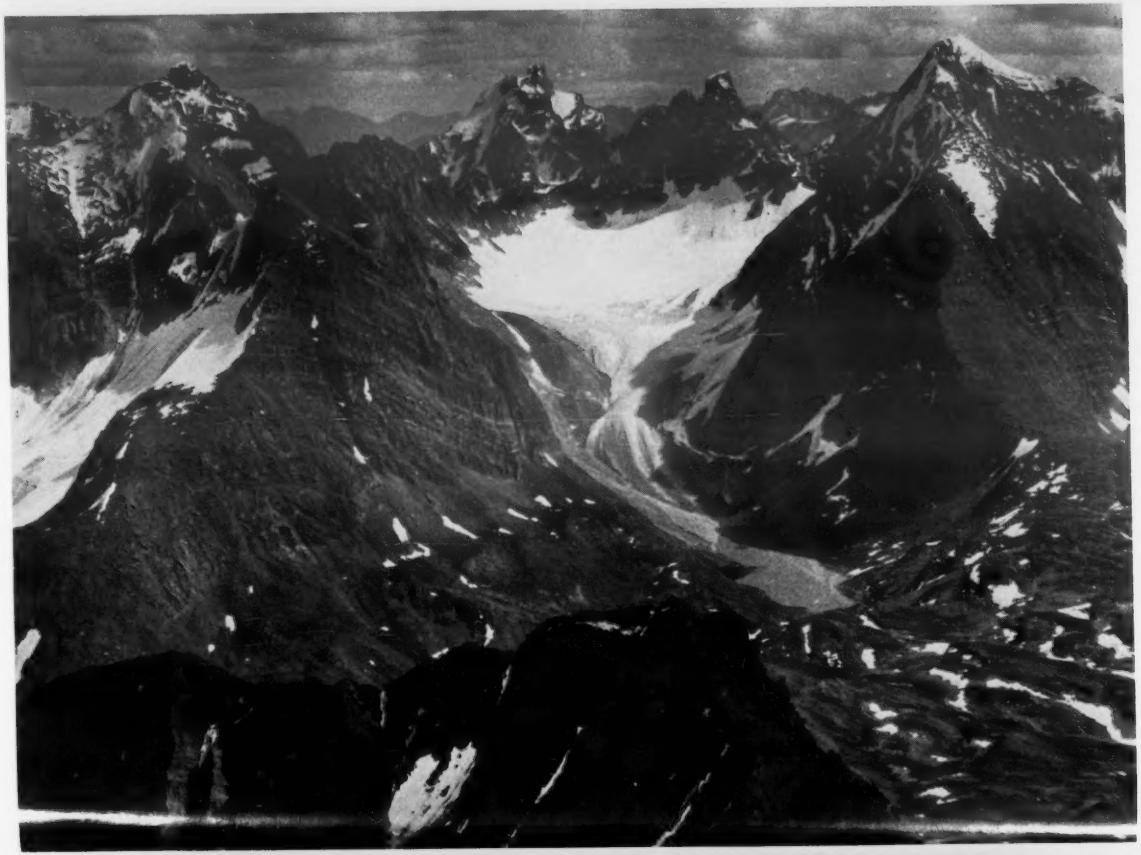


PLATE 52

VIEW TO EAST FROM "RECONNAISSANCE PEAK." From left to right: "Abendhorn," "Bisspitze," "Nebelhorn" and

PLATE 52

VIEW TO EAST FROM "RECONNAISSANCE PEAK." From left to right: "Abendhorn," "Eisspitze," "Nebelhorn" and

PLATE 53

LOOKING SOUTH ACROSS HEAD OF FOOL'S RIVER to peaks across Fish Kettle River.

PLATE 54 *Photo by Thomas*

THREE PEAKS OF INDEX. South (main) Peak is on right. Beckey-Claunch route ascended to biggest snow patch on middle peak and thence diagonally to the left.

In spite of the fact that each of these expeditions had enthusiastically confirmed the discoveries of the previous ones—namely, that here are some of the finest mountains in North America, a compact range of jagged spires and towering granite walls offering routes of every conceivable difficulty—the Logans were not visited again until 1960.

In mid-June, Stuart Krebs, Mason C. ("Pat") Hoadley, Stanley Shepard and I met at Jenny Lake, Wyoming, and began a leisurely drive northwards. Stopping for a few days' climbing here and there, we arrived in Watson Lake, Yukon Territory, on June 28. The following afternoon, pilots of the B.C.-Yukon Air Service transported us in two de Havilland Beaver aircraft to Brintnell Lake, 150 air miles to the north. As we flew north, the low forested hills around Watson Lake gradually gave way to higher, rounded and barren mountains. Finally, as we went over a low pass, there thrust into view a startling array of wild spires and peaks. Within half an hour, the plane was settling onto the smooth, milky water of Brintnell Lake, just a few miles below the immense hulk of Mount Harrison Smith, which rises from the valley in a 5000-foot sweep of slabs and smooth, exfoliated walls.

We were landed on a little peninsula near the northwest corner of the lake, where we were surprised to find a large government survey party camped. Unloading our half-ton of supplies and equipment and bidding farewell to our pilots, we set about hanging a large cache of food between two trees and then made camp for the night in a mossy little clearing.

Next morning, with provisions for ten days, we packed up into the high basin northeast of Mount Harrison Smith, the so-called "Cirque of the Unclimbables," actually a series of four small cirques, each ringed by sheer, smooth-walled spires. Somehow we turned upwards out of the Brintnell valley too early, and after many hours of battling alder, rain and mosquitoes, Stu, Pat and I reached the level floor of the basin late in the evening. Exhausted, we merely rolled out our sleeping bags in a convenient boulder cave and dozed off.

We were awakened early as Shepard staggered into camp, after having spent the night out. Now, in the sunlight, the surrounding peaks appeared slightly less foreboding than they had in the gloomy half-light of the previous evening. Nevertheless, we could see few feasible routes on the flawless granite faces and most of the summits appeared quite inaccessible. The floor of the basin in which we were camped was a rolling carpet of thick moss and heather with small streams meandering through it and great, angular blocks scattered randomly about—"Tombstone Meadows" we called it.

After setting up the tents and generally organizing our camp, we set off to explore the upper part of the valley. Climbing to a high talus bench on the east flank of Mount Sir James MacBrien, we obtained a fine view of the entire group of peaks, especially the peaks of the Third Cirque—"Parrot Beak Peak" and its neighbors, precisely sculptured pillars and buttresses sweeping skyward in graceful, unbroken lines. But still no obvious routes could be found, save the 1955 party's route on Sir James MacBrien. Awed and a bit discouraged, we returned to camp with considerable doubts as to what success we might have with these mountains.

An unsuccessful attempt on Mount Sir James MacBrien was followed by a day of intermittent rain. In the afternoon we made a brief reconnaissance of the First and Second Cirques, climbing to the crest of the great heap of debris which constitutes a single terminal moraine for the two small glaciers in the respective cirques. The results of this little stroll were encouraging—ledge and crack systems were detected on several peaks, and careful scrutiny evolved a few possibly continuous routes.

We arose early on July 4, but remained in camp several hours as storms repeatedly swept across the peaks. Finally, we set out for "Huey's Spire," the eastern summit of the ridge dividing the Second and Third Cirques—fairly low, but one of the prominent features as seen from our camp. Climbing to its western base in the Second Cirque, we ascended slabs and mossy cracks to gain a wide shelf spiralling around the south face to the east ridge, from which easy rock led to a subsidiary eastern summit. We climbed and rappelled down a deep chimney to the west, and then traversed out on narrow ledges onto the very exposed north face. The climbing soon became difficult and it began to snow, but after a couple of hard pitches, easy climbing continued to a second sub-peak. Once more we climbed down and traversed across the north face, behind huge, loose flakes to the west side of the summit block, from which the small flat summit was easily gained. On the descent, we climbed and rappelled to the notch between the two eastern sub-summits, and via three rappels to the south, rejoined the spiralling shelves of the ascent route.

After another day of rain, we left camp very early with the intention of attempting one of the high peaks at the head of the First Cirque. Unfortunately, we became separated in the moraine, and by the time we were reorganized, it was getting late and the beautiful weather was deteriorating rapidly. Shepard, who was not feeling well, returned to camp; he was able to climb on only a couple of occasions thereafter. The remaining three of us then turned our attention to "Terrace Tower," the sharp little spire on the east end of the ridge separating the First and Second Cirques.

Turning up into the Second Cirque we climbed steep snow slopes and rotten shelves on the north face to gain the large snowy plateau east of "Terrace Tower." The remainder of the climb up the east, then the north and finally the east faces of the summit tower was completed in a blizzard, accompanied by frightening views of the neighboring peaks glimpsed through occasional rifts in the clouds of blowing snow.

The following day we climbed "Crescent Peak," the principal summit on the ridge forming the east wall of the "Cirque of the Unclimbables." Uncertain weather delayed our departure until late morning, but we were able to make rapid progress across the maze of great tumbled talus blocks east of camp and up a shallow, slabby, southwest-facing couloir to its termination along the edge of an indistinct rib. We climbed the rib for a short way to a difficult wall, and then moved left into a gully where a steep, mossy slab led to a bench below the large snowfield on the upper part of the mountain's west face. Finding the snow deep and soft, we traversed right and followed the southwest ridge—pleasant scrambling alternating with level corniced sections—to the final summit cornice. Once again, it was beginning to snow, and we did not linger on the summit. Happily, we found the upper snowfield to be just solid enough for a long sitting glissade; the return to camp was uneventful.

The ninth was designated a rest day. In the afternoon, Shepard climbed the easy south ridge of "Trident Peak," a little metamorphic peak of reddish slate lying on the ridge between Sir James MacBrien and "Crescent Peak."

So far, we had had a measure of success with a few of the smaller peaks, but the higher summits appeared as forbidding as ever. Since it was time to make an all-out attempt to discover whether their defenses were as impregnable as they seemed, on July 10 Stu, Pat, and I decided to attempt "Mount Flattop." We walked through the jumble of morainal debris into the First Cirque, cramponed up the bare tongue of the dwindling glacier there onto its level upper basin. Rising out of this basin in a 2000-foot sweep of vertical rock, the east face of "Flattop" offered no hint of a route. The only possibility remaining was to gain the col on either the north or the south of the peak and to continue by the respective ridge to the summit; of the two, the northern col looked considerably more accessible. A series of three precariously attached snow patches leading up into the great concave wall below the col offered some hope. We climbed avalanche-scoured snow slopes to the small bergschrund, which was crossed with some difficulty onto a fragile corner of the lower snow patch. Steep and fluted, these little snowfields, alternating with short sections of rock, nevertheless provided

enjoyable going up the lower part of the face. Above, the rock was more broken than expected, and a complicated route was worked out up and diagonally leftward along little shelves and cracks to the knife-edged col north of the peak. As we approached the col, our spirits were high, but we had little reason for optimism—the 300-foot summit tower was most imposing and, yet once more, it had begun to snow. The north ridge rose in three steps, the first of which was climbed without appreciable difficulty. Then we traversed for two rope-lengths, out across the steep and frightfully exposed east face on a system of tiny flakes and thin ledges and then climbed flakes and a shallow corner to regain the crest above the second step. We climbed the final step directly, a sequence of difficult moves and followed the narrow, flat, snow-covered summit area to its highest point at the southern end. Here we erected a small cairn, ate a quick lunch, and were awed and a little horrified by the view of "Mount Proboscis" to the south. The descent was accomplished by a long and miserable sequence of rappels on wet and unruly ropes, with occasional sections of scrambling. It was late, and we were cold and tired when we reached camp.

Though the following morning started with rain, it cleared by noon. We retraced Shepard's route to the summit of "Trident Peak" and then continued northwest along the ragged ridge to "Ziegeberg," an easy granitic peak just northeast of Mount Sir James MacBrien.

Stan was feeling well enough to join us when we set off early the next day for an attempt on "Mount Meringue," the graceful snow-bedecked high peak at the head of the Second Cirque. We rapidly reached the great, oval snow basin of the Second Cirque, and climbed left up snow and exposed ledges to gain the low col in the southeasterly ridge of the mountain, separating it from "Bustle Tower." The narrow, gradually steepening ridge was followed for some distance to a steep, smooth step. Here a fortuitous snow-covered ledge led right, into the east face of the peak, where we climbed a succession of easy chimneys before being forced back towards the ridge. A short but difficult lichen-covered wall was surmounted, after which a bit of scrambling placed us on the upper snowfields. The remainder of the climb was a tiresome slog through waist-deep snow except for two steep, icy chimneys through rock bands. The summit ridge was a curving knife-edged arête of frozen, wind-packed snow, providing a jolly finish to the climb. With the hour not yet late and the weather so fine, we decided to continue on and climb "Phenocryst Spire," the westerly and slightly higher of twin rock peaks on the north wall of the Second Cirque. We descended the northeast ridge of "Mount Meringue," rappelling over two large vertical rock steps, to the high, snowy bench between the two

peaks, and then climbed the west ridge of "Phenocryst Spire." Access to the second main step on the ridge was blocked by a great detached flake, which necessitated a thin traverse on the north and a wide span across the intervening gap, whence the step itself was climbed in a nearly vertical jam crack. Above, alternate rock and snow led to the cylindrical summit block, where a shallow groove on the south side provided two long pitches on small nubbins and flakes. A direct descent into the Second Cirque was then made from the foot of the ridge by means of a steep snowfield and gully, necessitating but one long rappel.

From "Mount Meringue" we had observed that the western side of "Parrot Beak Peak" apparently offered a route of no great difficulty, although arduous and complicated to approach. Thus, after a rest day, we ascended through breaks in the cliffs of the headwall of the Fourth Cirque to "Cassiope Col," the broad saddle between Mount Sir James MacBrien and "Ziegeberg." Descent to the north was on high-angle, snow-covered slabs of dubious security. Turning west, we continued down morainal debris to a large, green lake, at whose southwest end a sizable glacier discharged. Traversing along the south edge of the lake on unstable, mossy talus was slow, but once we gained the glacier at the upper end of the lake, progress was much easier. We had barely reached a point below the west face of "Parrot Beak Peak," however, when we were caught in a heavy downpour, which ended climbing for the day. Reascending "Cassiope Col," we nearly met with disaster as a cornice high above broke loose, precipitating an impressive avalanche which missed us by inches and obliterated our tracks of a few moments before.

Another day of rain intervened before we could return to "Parrot Beak Peak." It was still early morning when we reached the glacier above the green lake. When soft snow on the glacier made the going difficult, we moved left onto the eastern lateral moraine. Selecting a break in the lower cliff bands of the peak, we climbed a mossy, chockstone-filled couloir for several hundred feet and then made a long diagonal traverse to the right on narrow shelves to the breakable crust-covered talus slopes of the upper face. Finally, a section of rock led to the sharp notch between "Parrot Beak Peak" and "Tathagata Tower" to the south. Then, moving left over mixed steep ice patches and rock, we reached the broad, sculptured snow crest leading east to the summit, a sharp little rock tower. Arriving on the summit by mid-morning in better weather than any we had yet seen, we decided to try the two spires to the south. Back in the notch we attacked the north ridge of "Tathagata Tower," first climbing a steep crack between the rock and a section of cornice to a belay spot. There followed a long,

difficult pitch, a face climb on small holds ending in a jam crack, from which a short, wet and mossy friction pitch led to the summit. We scrambled down the south side to a 40-foot overhanging step, where we rappelled into the notch between the two towers, leaving the rope in place for the return. Then an exposed ridge, where we climbed over, under, and around dripping cornices, and some steep snow-covered slabs led us to the summit of "Lotus Flower Tower." We retraced our steps to the summit of "Tathagata Tower," from which a 150-foot rappel and some precarious scrambling placed us once more at the notch from which we had begun the ascent. We glissaded a long, icy couloir and made our way through the lower cliff bands back down to the glacier.

On July 17 we climbed Mount Sir James MacBrien. Instead of gaining the west ridge above the great lower cliff band, as on our previous attempt, we traversed far right to an ill-defined rib in the center of the upper south face. The rest of the climb to the heavily corniced summit involved little more than difficult scrambling. Shortly after leaving the summit, we were enveloped in a furious blizzard, and the descent was accomplished in a series of frantic dashes between sheltered overhangs during lulls in the storm.

This unfortunate turn in the weather precluded any climbing activity for the next five days, although on the 20th we made another trip to Brintnell Lake for supplies. We carried fairly large loads to the base of Mount Harrison Smith, where we cached twelve days of food, the rest being carried on up to our camp, giving us provisions there to last until the end of the month.

For some time it had been evident that of all the peaks in the "Cirque of the Unclimbables," "Mount Proboscis" presented the greatest difficulties; since it now remained the only major unclimbed peak of the group, we focused our full attention upon it. Rising like the dorsal fin of some great prehistoric beast, it is an impressive sight when viewed from any angle. Its east face presents over 2000 feet of flawless, vertical boiler-plate. Separated from it by an obtuse, vertical corner is a scarcely less terrifying northeasterly face; the west face differs from the east only in being perhaps somewhat shorter. The unattractive north ridge, a knife-edge thickly coated with bulbous, succulent cornices, is accessible only by first climbing over "Flattop." Therefore, we concluded that our only hope lay in the south ridge, even though it had defeated an attempt by the 1955 party and we had not yet had an opportunity to study it carefully.

On July 23 we arose early to find the sky clear save for occasional wisps of cloud blowing across the peaks. Shepard was feeling better than usual

and he joined us as we started off to try "Proboscis." After cramponing up the tongue of the glacier in the First Cirque, we climbed left up a steep snow and ice chute to "What Notch," the sharply incised, nearly hidden col between "Proboscis" and the "Pentadactyl Spires" to the east. We glissaded to the south onto a fragmentary glacier and then traversed along the base of the stupendous southeast wall of "Proboscis." In order to reach the south ridge of the latter, we should first have to climb over "Mount Contact," a little peak lying on the contact line between the granite rock and the metamorphosed sediments to the south. We paused on this subsidiary summit, for a mid-morning snack and a detailed examination of the proposed route on "Proboscis," an awesome prospect indeed. Ropes were broken out on the descent to the intervening notch, at which point the real difficulties began. A moderate 30-foot pitch led to a secure belay behind a large rhomboid flake. A short and fantastically exposed piton traverse to the right gave access to a vertical crack up which, by means of a strenuous layback, we gained the sloping crest of the first step of the ridge. The second vertical discontinuity proved easier than it had looked; by climbing up a flake leaning against the step we reached a shallow groove leading up and to the right, where a move around the corner was followed by an easy slab to a belay. We then walked easily along the crest to the third step of the ridge. Smooth and massive, the only flaw we detected was an embryonic crack system up the center of its face. Six widely spaced, direct-aid pitons, a delicate mantelshelf onto a two-inch ledge, two more dubious knife-blade pitons for aid and some tenuous climbing on small nubbins, solved this problem, however. Before we were all up this pitch we were beset by a rapid succession of rain storms. After waiting for a couple of hours with no appreciable improvement in weather, we abandoned our attempt, leaving two fixed ropes in place.

It rained and snowed almost continuously for the next five days. Great, dripping shrouds of cloud shifted among the peaks, occasionally rising slightly, then settling in heavier than ever. On the fifth day the storm began to dissipate, and we retired early in anticipation of another assault on "Proboscis" the following morning. We left camp shortly after midnight on the 29th, but when we reached the broad, southern shoulder of "Mount Contact," a low overcast was already obscuring the higher peaks. In order not to waste the day entirely, after a considerable wait we decided to climb "Cat Crest," the low sedimentary eminence lying in the sharp angle of the Brintnell valley. We traversed across the southeast face of "Mount Contact" to a little col above the southern edge of the "Polymer Glacier." After scrambling along a badly fractured ridge of black slate,

we finally followed a set of cougar tracks up the final snow arête to the enormous, flat, summit plateau. By noon when we had returned to the shoulder of "Mount Contact," the weather was so encouraging that we decided to continue the attempt on "Proboscis." We quickly traversed over "Mount Contact," then prusiking up the fixed rope and climbing the other sections, reached our previous high point by mid-afternoon. Above the level knife-edged crest of the third step, we ascended the next vertical section by a short, icy traverse out onto the west face, which was followed by a long moderate pitch, slabs and laybacks to regain the sharp ridge. An *à cheval* section of ridge led to a little notch, above which there rose an imposing tower. This pitch proved to be the crux of the whole climb. Moving down and left out of the notch and onto the west face again, a 65° slab was climbed for 40 feet on tiny nubbins; a long traverse left into a corner, using cracks offset barely a quarter of an inch, and a delicate, nearly vertical section, gained the top of the tower. Beyond, the ridge continued as a series of sharp, barn roofs separated by little gaps. Constant care was necessary, and a fixed rope was left where we made a short rappel into one of the clefts, but no great difficulties were encountered. Finally some dangerously corniced sections of ridge and an easy bit placed us on the summit ridge—the corniced upper edge of a tilted oval snowfield, spectacularly overhanging the west face. After walking to the apparently highest point, we built a small cairn at the south end of the summit ridge and began the descent. The upper sections were again slow but not hard. In rappelling the difficult sections below, it was necessary, in almost every case, to rappel off one or the other of the exposed faces and then pendulum across to the top of the next lower step on the ridge. It was after two A.M. when we finally arrived back in camp. This ascent was the high point of the expedition, and it certainly ranks among the most difficult rock peaks of North America.

After a well-deserved rest day, we climbed Mount Harrison Smith and "Middle Cathedral Peak." A steeply sloping snow-covered shelf ascends diagonally across the north face of the massif, between towering vertical cliffs, to the broad col between the two summits. We easily gained the lower, westerly end of this shelf but soon encountered a deeply indented, icy, avalanche-scoured gully. After belaying carefully across this for several hundred feet, we then continued along the upper edge of the shelf to a point directly below the summit of "Middle Cathedral Peak." Here we turned upward and climbed the broken face above, an unpleasant combination of huge, rotten flakes, ice and unstable snow. Finally, a rock pitch of considerable difficulty placed us on the peak's east ridge, just a short dis-

tance below the summit. We descended easily to the broad col to the east. Bypassing an intervening summit by climbing down a steep, rock chute on the south, we followed the west ridge of Mount Harrison Smith to its summit. The only difficulty encountered was the traverse on the north of the final gendarme of the ridge, where we found a piton, apparently left by the 1955 party. Descending via the snow band, we found snow conditions far worse than in the morning, and each step sent a sizable avalanche plummetting over the great cliffs below.

Now having climbed all of the major peaks accessible from "Tombstone Meadows" and eager to try some of the spectacular peaks to the south, on August 1, we packed down to the main valley, and made camp at the foot of Mount Harrison Smith. Shepard returned to Brintnell Lake, where he remained throughout the rest of our stay in the mountains. With ten days' food we started next morning up the Brintnell valley. From the outwash flats above the sharp bend in the valley we crossed the braided river and proceeded up the long moraine on the true right side of the steep Longwell Glacier tongue to a point where we could traverse onto the gentler upper part of the glacier and thence to camp on the Harlin Icefield.

Next day we continued along the eastern margin of the icefield to a little col where a small glacier spills over eastward into a minor tributary of the Fool's River. The peak on the south side of the col, "Reconnaissance Peak," involved about a thousand feet of scrambling on solid, erosion-pitted limestone. From the summit we obtained a fine view of sharp peaks lying between the two forks of the Fool's River, a worthy objective for this last portion of the expedition. After returning to the col, we also climbed "Brintnell Peak," the massive, sedimentary peak to the north. A long, tiring climb up loose scree placed us atop a subsidiary summit separated from the main summit by two deep gaps. Some precarious scrambling was necessary along this section of ridge, and it was late afternoon and raining lightly when we reached the summit. A rapid descent was made down a scree chute on the south, to the icefield. We quickly regained the col, donned our packs and started down the small glacier to the east. Below the glacier we continued down to the level valley of the western fork of the Fool's River where we made camp in a grassy, forget-me-not-covered meadow.

This valley lies entirely in the sedimentary zone; its head presents a gentle, terraced karst terrain, with no surface drainage. Its eastern wall is dominated by two pyramidal limestone peaks, "Das Abendhorn" to the north and "Plymouth Peak" to the south, the latter situated on the divide

between the Fool's River and the Fish Kettle River. East of these peaks, the igneous rock resumes once more.

On August 4, above the lush meadows of the valley, we turned left into the deep cirque between "Das Abendhorn" and "Plymouth Peak," heading for the attractive peak at the southeast corner, which we called "Das Nebelhorn." Passing a lovely, green lake on the north, we cramponed up a sinuous glacier to its upper névé basin. Crevasses near the top of the steep snow below the col between "Das Abendhorn" and "Plymouth Peak," caused some difficulties. We climbed eastward out of the col, which is formed along the granite-sedimentary contact line. A traverse on south-facing snowfields led to the notch between "Das Nebelhorn" and "Zebra Spire," a large tower on the northwest ridge of the former. A diagonal route across the west face of "Das Nebelhorn" was airy but not especially difficult, and led to the flat, narrow summit. On the descent, we also climbed "Zebra Spire" by its south ridge, a spectacular third-class scramble. Back at the col, we started up the east ridge of "Plymouth Peak." Except for a section of loosely piled, cubical pebbles, the route was on steep, firm limestone, generally provided with an abundance of fine holds. Half-buried in the summit cornice, we found a small cairn left by the Yale expedition. The northwest ridge offered a quick and easy descent to the valley, and we were back at camp by early evening.

East of "Das Nebelhorn" is "Die Eisspitze," one of the most beautiful peaks on the Fool's River drainage. We ascended the glacier above the green lake again, this time climbing the névé above to the low col to the east. We descended the east side of this col with some difficulty to another small glacier, which we crossed to the base of the northwest ridge of "Die Eisspitze." A steep, icy shelf was followed diagonally left to the center of the north face, where a thin veneer of frozen snow allowed us to kick steps up the 55° ice sheet to a sharp, false summit. The triple-pronged true summit was reached by a little knife-edge and some steep ice patches on its west face. Here again, we found one of the Yale expedition's cairns. Considerable caution was necessary on the descent, as the snow was already softening and threatening to avalanche. We next climbed "Mandible Peak," a small summit north of the col across which we had come earlier in the day. We crossed the glacier below "Die Eisspitze" and climbed a boulder slope and a steep snow chute to a notch in the peak's east ridge, which was easily followed to the summit. From there we continued westward along the ridge to "Das Abendhorn." Halfway, is a cluster of three sharp granite teeth, the central one of which we climbed by its east face; an

involved route was worked out traversing below the south side of the western tooth. The east ridge of "Das Abendhorn" was an easy scramble, except for a short vertical step, where the friable nature of the limestone justified the use of one piton. We descended by the long and somewhat difficult northwest ridge.

The following day, Pat and I made an easy ascent via the south arête of "Marble Mountain," a minor sedimentary peak north of "Das Abendhorn."

We got an early start on August 7, planning to go down the Fool's River to the junction of the two forks, then to follow up the east fork and climb at least one of the peaks there. However, after battling heavy bush, we changed our plans and instead climbed Mount Ida, a long grind up talus slopes on the south side. Centrally located and isolated, this peak commands a superb view of a large section of the range and gave us the opportunity to correlate our knowledge of the area.

The next day in order to study the region south of the Fish Kettle River, we climbed "Karst Mountain," a peak about two miles due west of "Plymouth Peak." We wandered leisurely up the valley, then right, across the jagged *karrenfelder* to a low, glacier-covered pass north of the peak. The summit was reached by cramponing up a sheet of glacial ice on the northwest face.

A day of heavy rain and fog followed, and on August 10 we started back towards Brintnell Lake, returning as we had come. We found the Brintnell River swollen to nearly a foot above its previous level. In attempting to cross, Stu was swept off his feet and barely managed to swim with his pack to the opposite shore. Pat and I managed to find a slightly shallower place to cross. After drying soaked gear, we continued down the Brintnell to our earlier campsite below Mount Harrison Smith. The next afternoon, we returned to Brintnell Lake. On the evening of August 13, we were met by our pilot and flown back to Watson Lake.

Nearly all of the major peaks on the Brintnell and Fool's River drainages have now been climbed. However, the "Cirque of the Unclimbables" still offers a multitude of unclimbed routes which should provide a challenge to rock climbers for years to come. In variety and difficulty of potential routes, this single cluster of peaks is at least the equal of any of the more famous areas of North America. In the region south of the Fish Kettle River there are untold possibilities for ascents of virgin summits, and there are many important unclimbed peaks to the north and west of the Harlin and Flint Icefields. It is hoped that in the future this splendid range will receive more of the attention which it so rightly deserves.

Summary of Statistics

AREA: Logan Mountains, Northwest Territories, Canada.

ASCENTS:

(All first ascents except where noted. All ascents made by Buckingham, Hoadley and Krebs unless otherwise noted.)

"Huey's Spire," July 4, 1960 (entire party).

"Terrace Tower," July 5, 1960.

"Crescent Peak," July 7, 1960.

"Trident Peak," July 9, 1960 (Shepard) and July 11, 1960.

"Mount Flattop," July 10, 1960.

"Ziegeberg," July 11, 1960.

"Mount Meringue" and "Phenocryst Spire," July 12, 1960 (entire party).

"Parrot Beak Peak," "Tathagata Tower" and "Lotus Flower Tower," July 16, 1960.

Mount Sir. James MacBrien, July 17, 1960, third ascent, new variation.

"Mount Contact," July 23, 1960 (entire party). (First ascent in 1955.)

"Cat Crest," "Mount Contact" and "Mount Proboscis," July 29, 1960.

"Middle Cathedral Peak" and Mount Harrison Smith, July 31, 1960, third ascent, new route.

"Reconnaissance Peak" and "Brintnell Peak," August 3, 1960.

"Das Nebelhorn," "Zebra Spire" and "Plymouth Peak," August 4, 1960, the last a second ascent by a new route.

"Die Eisspitze," "Mandible Peak," "Middle Tooth" and "Das Abendhorn," August 4, 1960, the first a second ascent by a new route.

"Marble Mountain," August 6, 1960, second ascent (Buckingham, Hoadley).

Mount Ida, August 7, 1960, second ascent.

"Karst Mountain," August 8, 1960.

PERSONNEL: William Buckingham, Mason C. Hoadley, Stuart Krebs, Stanley Shepard.

Naming America's Mountains—The Colorado Rockies

FRANCIS P. FARQUHAR

THE NAMED peaks of the Colorado Rockies are so numerous that it would take an entire book to do them justice. Fifty-four peaks stand over 14,000 feet above sea level, while some 250 more are over 13,000 feet. Accordingly, a selection must be made for present purposes, and in making this selection I have favored mountains whose names have stories behind them or that have interesting climbing histories. Not even all of these have been included, as, for instance, GRAYS, TORREYS, PARRYS, named for three great bontanical explorers. Their stories are rather long and complicated; moreover, they are so well told by Hart, in *Fourteen Thousand Feet,* that there is little to add. As for other omissions, I can only say that I have preferred to concentrate on the subjects at hand and leave plenty of material for another occasion or another writer.

The Colorado Rockies comprise not only a vast number of individual mountain peaks, but an intricate complex of sub-ranges which form the watersheds of many rivers that flow into far-distant seas. Included is a long stretch of the Continental Divide. These ranges are ably defined and discussed by Kenneth Segerstrom in "The Mountain Ranges of Colorado," (*Trail and Timberline,* September, 1936). The peaks are listed in Roger W. Toll's *The Mountain Peaks of Colorado,* 1923, which, while out of date as to altitudes, is still a useful document. The most recent work on the subject is *The Colorado Mountain Club's Guide to the Colorado Mountains,* edited by Robert W. Ormes, third edition, 1959. I have used this as authority for altitudes. It will be obvious to anyone familiar with the literature of the Colorado mountains that I am heavily indebted to "Jerry" Hart's *Fourteen Thousand Feet* for guidance through the intricate mazes of Colorado mountain history. Moreover, I am indebted to him personally, as well as to Edmund B. Rogers and James Grafton Rogers, for helpful comments and for supplying information. Of great assistance in reference to maps is the recent monumental work of Carl I. Wheat, *Mapping the Transmississippi West,* now in four volumes, with a fifth in preparation. But,

notwithstanding the aid furnished by these publications and by my friends, I have in almost every case gone back to original sources of information.

References in the text are given in abbreviated form, supplemented by a reference list of full titles at the end.

Although the few examples of names selected cannot be said to constitute a reliable basis for drawing conclusions, nevertheless, they do seem to indicate in a general way the kind of names that have been given to Colorado's mountains. Of the present twenty-one names, five are those of explorers and climbers (Hagerman, James, Long, Pike, Wilson), three are complimentary personal names (Elbert, Lincoln, Sopris), five are commemorative (Columbia, Harvard, Oxford, Princeton, Yale), six are descriptive (Capitol, Castle, Holy Cross, Lizard Head, Maroon, Snowmass), one is a fanciful name (Sneffels), and one is derived from the Indian language (Uncompahgre).

CAPITOL PEAK (14,100) *Elk Mountains*

"The hardest of the Elks to reach and one of the most rewarding to climb. The first ascent was that of the Hayden men, who carried 40-pound sacks of instruments. Like Whitehouse and Treasury, it was named for a government building." (*Ormes: Guide,* p. 110.)

"A little to the north of Snow-Mass, the range rises to another yet greater mountain. The two are known to the miners as 'The Twins,' although they are not at all alike. . . . After mature deliberation the expedition christened them the White House and the Capitol." (W. H. Rideing, in *Picturesque America,* Vol. 2, p. 502.)

"Snow-Mass Mountain and Capitol Peak are two of the principal high points in this area. (*Hayden Report, 1873,* p. 260.) "Capitol Mountain, one of the crowning summits of the range, whose gray, prism-shaped top and precipitous sides forbid access." (*Hayden Report, 1874,* p. 417.) On the map, 1873, it is not shown as occupied.

"Capitol . . . so named for its form." *(Gannett: Place Names.)*

CASTLE PEAK (14,259) *Elk Mountains*

"At the head of the amphitheater thus formed is Castle Peak, a high, black-looking peak. . . . We ascended the mountain, but the weather was so stormy that I did not attempt to make any section." (A. C. Peale, in *Hayden Report, 1873,* p. 255; the map shows the peak as occupied.)

"Castle Peak . . . is the highest peak in the Elk Mountains. . . . It has a conical summit, from which the main ridge runs south, in a succession of high, needle-like points, which rise several hundred feet above the ridge.

. . . The summit is well-nigh inaccessible, the only way to reach it being up a crevice on the south side." (Henry Gannett, in *Hayden Report, 1874,* p. 418.)

"Castle Peak, of purple sandstone, afforded more of a climb than any other Colorado mountain, with which I have any acquaintance. For this ascent we camped at timber line, 11,500 feet, at the southwest base of the peak, and started up the ridge which runs west from the summit. The face of this ridge is composed of horizontal beds of rock, presenting an alternation of cliffs and slopes. Our only way of surmounting the lower cliff was in finding a crevice, up which we climbed, putting the back against one wall and the feet against the other, and alternately raising the points of support, thus slowly and painfully making progress upward. Above the cliff was a steep slope, at the top of which was a second cliff, which we climbed in a similar manner, and so on to the top of the ridge. The ridge was very narrow in some places, with a cliff on either side, and while it was possible to walk on it, the prospect was not alluring. So we straddled it, using our hands for propellers. Occasionally the ridge widened, to support a pinnacle of rock, which we got around by close hugging, when it was not too large. We reached the top of the mountain just in time to be enveloped in a storm, and the few glimpses of the surrounding country which we obtained through gaps in the clouds were very unsatisfactory." (Henry Gannett, "Famous American Mountains," in *Everybody's Magazine,* May, 1902, pp. 431-432.)

"Named for its castellated summit." *(Gannett: Place Names.)*

COLUMBIA, MOUNT (14,073) *Sawatch Range*

Named in 1916 by Roger W. Toll (1883-1936), a graduate of Columbia University, 1906. It is one of the monuments to this able mountaineer and distinguished public servant. Roger Toll was superintendent of three national parks: Mount Rainier, 1919-1921; Rocky Mountain, 1921-1929; and Yellowstone, 1929-1936. He made many ascents in the Colorado Rockies and compiled two noteworthy pamphlets: *Mountaineering in the Rocky Mountain National Park,* 1919; and *The Mountain Peaks of Colorado,* 1923. He was a charter member of the Colorado Mountain Club, a member of The Mountaineers, and of the American Alpine Club. (Memorials in *T. & T.,* March-April, 1936; and *A.A.J.,* 1937, pp. 92-94.)

ELBERT, MOUNT (14,431) *Sawatch Range*

"Named in honor of the governor of Colorado." (*Hayden Report, 1873,* p. 239.) The Hayden map, 1873, shows it as occupied. "The name is

found before 1873." (*Hart, 1931,* p. 18.) "Mount Elbert, highest of the Colorado peaks, exemplifies the easy walk-up mountains which in winter can be climbed all the way on skis." (*Ormes: Guide,* p. 67.) It ranks second highest in the United States exclusive of Alaska.

Samuel H. Elbert, (1833-1899), a native of Ohio, came to Colorado in 1862 as territorial secretary under Governor Evans. He married Evans' daughter Josephine in 1865. In 1869 he was elected to the territorial legislature, and in March 1873 was appointed by President Grant Governor of the Territory of Colorado. Upon the admission of Colorado to statehood he was elected a judge of the state Supreme Court and continued in that office until 1897. He died November 27, 1899.

HAGERMAN PEAK (13,600) *Elk Mountains*

"Percy Hagerman (1869-1950) was a business man and sportsman. . . . His father, J. J. Hagerman, . . . built the Colorado Midland Railroad's standard-gauge line to Aspen, and his name still stands on the tunnel where the Midland pierced the Continental Divide west of Leadville. . . . Percy Hagerman, like his father, left his name on the Colorado map, as the rugged peak directly west of Snowmass Lake in the Elk Mountains has been appropriately named for him. Hagerman loved this peak, and it was, incidentally by mistake, the first one that he climbed in the Elk Range. This climb took place in 1907 when Hagerman was 38 years old. He was accompanied by Harold W. Clark, a 45-year-old lawyer and mining man of Aspen. . . . The two men set out to climb the mountain labeled Snowmass on the Hayden Atlas, but found themselves on the top of the 'gracefully curved and extremely sharp southeast ridge' of Snowmass. The next year they climbed the right summit, but the mountain with the sharp ridge was still Hagerman's favorite. Clark managed to have this peak named after Hagerman, . . ." (*Hagerman: Notes,* preface.)

"This Photographer's dream peak honors Percy Hagerman, one of the earliest climbers to look for fun in the rough country." (*Ormes: Guide,* p. 108.)

HARVARD, MOUNT (14,420) *Sawatch Range*

Professor Josiah Dwight Whitney, Chief Geologist of the California State Geological Survey, and Professor William Henry Brewer, who had been his principal assistant in California from 1860 to 1864, took a party of four of Whitney's Harvard students on an exploring expedition in the Rocky Mountains in the summer of 1869. A record of what took place is preserved in letters written by Brewer to his wife. *(Brewer Letters.)*

"Lying to the west of the Arkansas River is a great wilderness of mountains, a *terra incognita* so far as maps and geographies are concerned, although perhaps fully penetrated by prospectors or half-civilized adventurers. . . . We selected a group of mountains lying some twelve to twenty miles to the southwest of Granite. . . . As they had no popular names, we resolved to call one Mount Harvard, the other Mount Yale, after our respective universities" (p. 36). (While both men were Yale graduates, Whitney was at the time teaching at Harvard, Brewer at Yale.)

"As I have said, our provisions were short, *very* short. It was very desirable to get on Mount Harvard, and we felt sure that it could be reached from that camp. Sharpless, Davis and I wanted to try it, but all could not, for provisions were a prime necessity for such work. It was essential that some of us return to our valley camp, and it seemed essential that I should be one of that party for the sake of getting the pack-mules down. . . . So it was decided that Whitney, Moore and I should return to the valley camp with all the animals, while Sharpless and Davis should climb the peak and then walk to the lower camp. . . . They left before six in the morning (August 19). . . . You can imagine how I felt as they went off. . . . After I had carried the barometer to the top of every high point measured thus far, when it came to the *highest* probable point, I had to relinquish it to others, because they could not get the pack animals where I could. . . . At camp we found everything as we had left it, safe and sound, when we arrived about three o'clock. Heavy showers succeeded each other until near sunset, when it set in and rained heavily for most of the night. . . .

"We were anxious for Sharpless and Davis. . . . It seemed evident that they must stay out all night in the pitiless storm and face the cold and hunger as one of the episodes incidental to mountain exploration. Nevertheless, we built a bright campfire of as big logs as we could lift—perchance they might be where they could see it—to guide them in. At last, after many fruitless wonderings as to where they were, we turned in. . . . It was after ten when we heard them about, as they came into camp, of course, drenched to the skin, hungry and about used up. . . . They had reached the peak through the clouds, had got barometrical observations to get its height, but saw nothing through the cloud and storm from the summit. . . . They had been eight hours in reaching the summit from our mountain camp, and were eight more in getting down to the valley camp, not counting the time spent on the top" (pp. 39-40.)

It is appropriate that one of the men to make the first ascent of Mount Harvard should be not only a Harvard graduate (1870) but a teacher at

Harvard for the greater part of his life—William Morris Davis (1850-1934).

HOLY CROSS, MOUNT OF THE (13,996) *Sawatch Range*

The early history of this mountain has been reviewed by Fritiof M. Fryxell in a manner that can hardly be improved upon. "As a matter of fact," he says, "the mountain does not emerge from obscurity until 1869. On August 29 of that year William H. Brewer and several companions ascended Grays Peak and subsequently in describing the summit view, Brewer noted that the Mount of the Holy Cross could be seen forty miles away, 'with its cross of pure white, a mile high, suspended against its side.' This earliest known reference to the peak is in *Brewer Letters,* p. 49. Brewer is also responsible for what is very likely the earliest published reference to the peak, a note in the account of his 'Explorations in the Rocky Mountains and the High Peaks of Colorado,' read before the American Geographical Society on February 28, 1871, and published in 1873 in the journal of the Society. (Vol. 3, p. 214.) The casual character of these early references implies that by 1869 the Mount of the Holy Cross was generally known and its name already established." ("The Mount of the Holy Cross," by Fritiof Fryxell, in *T. & T.,* January, 1934.) Fryxell gives credit to early prospectors, who "were probably also responsible for spreading information about this peak beyond the immediate locality."

William H. Jackson, who is himself so closely associated with the history of the mountain, speaks of its legendary discovery and says: "It was a beautiful legend, and they nursed it carefully. But anyone who wanted to see Holy Cross could climb Gray's Peak on a clear day and pick it up with field glasses. As one comes close to the cross it always disappears behind Notch Mountain—and that is how the myth establishes itself." (*Jackson: Time Exposure,* p. 216.) Jackson goes on to describe the first ascent and how he made the first photographs, in 1873. "On the morning of August 23 we separated into two parties. The larger, headed by Gardner, Hayden, Professor William Dwight Whitney of Yale University, and William H. Holmes, later the distinguished head of the National Gallery, were off to climb Holy Cross, for the purpose of completing a triangulation from the summit. Coulter [botanist] and Tom Cooper, one of my packers, went with me to try for some photographs from Notch Mountain across the ravine. . . . By the time all three of us had arrived at the summit, the sky was too overcast for successful photography. . . . Leaving our equipment at the crest, we walked down to timber line and built a fire. There we rested on the stony ground until morning, . . . At dawn we were cold, stiff,

hungry—and elated. The day, or at least the morning, promised to be magnificently clear and sunny. . . . By the time I had enough [water] to develop and wash a few plates the long flamelike shadows on Holy Cross were rapidly sweeping down into the Valley, and, using two cameras, I had made just eight exposures when they were gone. But, with the early sun, those shadows had already helped me to take the finest pictures I have ever made of Holy Cross." (*Same,* pp. 217-218.)

A few additional facts appear in another version, also by Jackson: "It was a perfect day for the making of the first photographs of the Mountain of the Holy Cross. The early morning is just the time, too, for this particular subject. I do not think it can be successfully photographed later in the day. Having but one point of view from which to make the negatives, I was through before noon. . . . I struck out ahead and reached camp by two o'clock. Coulter and Tom, taking things more leisurely, arrived two hours later. Gardner and Holmes, of the other party, came in at six. Dr. Hayden with two or three others had returned from the mountain the evening before. . . . The Doctor was immensely pleased with our success; and all were greatly interested in the results, as none had seen the Holy Cross itself, except our photographic party of three." (*Jackson: Pioneer Photographer,* pp. 196-197.)

Gardner and Holmes alone completed the first ascent. "Expecting to reach the peak and return in one day we only carried a little lunch, two slices of bread apiece. This was all we had to eat for two days of tremendous climbing. We succeeded in getting splendid observations and photographs." (*Gardiner Letters,* p. 149.) James Terry Gardner (1842-1912) changed the spelling of his name in later life to *Gardiner.* A graduate of Yale, he accompanied Clarence King to California and was with the Whitney Geological Survey, 1864-1867, after which he was with the King Survey and later with the Hayden Survey. He lived for most of his life in New York State.

In 1874 Thomas Moran (1837-1926), great painter of western landscapes, accompanied the Hayden Survey party to Colorado. "The work which resulted," says Fryxell, " 'The Mount of the Holy Cross, Colorado,' is conceded to be one of Moran's greatest paintings and was awarded a medal and diploma at the Centennial of 1876. In view of the difficulties experienced by the 1873 party . . . it was at first thought that Moran himself probably did not get to see the peak at close range and that he had depended solely upon Jackson's photographs for his interpretations of the peak itself. However, a letter has been discovered from Moran to his wife, written August 24, 1874, in which he recounts the difficult climb he and

his men had just made up Notch Mountain to get the magnificent view of the Cross." (*Jackson-Marshall: Quest,* foreword.) Moran's letter is given in full in "Thomas Moran's Journey to the Mount of the Holy Cross in 1874," by Fritiof Fryxell, *T. & T.,* September, 1935, from which the following is quoted: "After lunch we again started through the timber upward and at two-thirty o'clock we were at twelve thousand feet. Here we were in clear view of the Cross, and although still eight hundred feet below where we had intended to reach, we were all so tired that we concluded that we had gone far enough. We rested half an hour and then started on the back track, getting back to camp in three hours. In the Valley is one of the most picturesque waterfalls that I have ever seen. I shall use it in the foreground of the picture."

On May 11, 1929, a presidential proclamation established Holy Cross National Monument; but when the distinctive feature became obscured by deterioration of one of the arms, monument status was abolished by Act of Congress, August 3, 1950. "The evidence is that the cross was deficient in the west arm always. Jackson's pictures are retouched. I think there has been no collapse. Some years the arm shows well in the early spring." (James Grafton Rogers.)

JAMES PEAK (13,260) *Front Range*

Although deprived of the distinction of having his name on a major peak, Edwin James is, nevertheless, remembered by a lesser one near Berthoud Pass. "The name was probably given by Parry who in 1866 and previously climbed and measured the present James Peak. He climbed and measured Grays, Torreys, and Engelmann, a short distance to the south, all three names being those of botanists, and so it is likely that he did the same for the botanist James. The next place in which this peak is called James Peak is in an article by Sniktau in the *Weekly News* for October 30, 1867. The name was mistaken by A. E. Matthews, who called it St. James Peak in his 'Gems of Rocky Mountain Scenery' 1869." (*Hart, 1931,* p. 10.)

Edwin James (1797-1861), was born in Vermont and educated at Middlebury College, where he studied botany. Subsequently he studied medicine; then botany and geology, the former under Torrey. He accompanied Major S. H. Long's expedition to the Rocky Mountains in 1820 and wrote the principal journal. He became Colorado's first botanist, and with the climb of Pikes Peak in 1820 was the first man to climb a 14,000-foot peak in the United States. (See: LONGS PEAK and PIKES PEAK.) His life and character are described in *Rocky Mountain Naturalists,* by Joseph Ewan, Denver, 1950.

LINCOLN, MOUNT (14,284) *Mosquito Range*

"Certain incidents associated with the christening of Mount Lincoln . . . were related to me by Hon. Wilbur F. Stone, who at the time noted was a placer miner in Montgomery. In June, 1861, he ascended to the highest point of the mountain. . . . Profoundly impressed by the grandeur of the scenic spectacle witnessed from the summit, on his return to Montgomery he called a meeting of citizens for the purpose of selecting an appropriate name for it. . . . Mr. Stone advised the selection of a comprehensive title that would indicate its position as one of the great landmarks of the country. One or two Spanish and Latin names were suggested. One mentioned Washington, another Adams, another Jefferson, when, as by a common inspiration, all shouted the name of Abraham Lincoln, which signified unanimous adoption." (Frank Hall, *History of the State of Colorado,* 1895, Vol. 4, note on p. 262.) There are earlier names for the mountain and other versions of the naming for Lincoln.

There is no doubt that some miner made an unrecorded first ascent before 1861 and that many others followed before 1869, when, on August 4, Josiah Dwight Whitney, William H. Brewer, Charles F. Hoffmann, and William Morris Davis climbed the mountain. Brewer writes: "The next morning . . . we were off at 6:30, and in four hours were on the summit of Mount Lincoln. . . . It is 3500 feet above Montgomery, and perhaps about 14,300 feet above the level of the sea. . . . The view was one of the sublimest I have ever seen." (*Brewer Letters,* pp. 29-30.) In 1873 the Hayden Survey ran a series of levels to the summit and found it to be 14,296.66 feet "above mean surface of Atlantic Ocean." Considering all the uncertain factors involved, not to mention the "mean surface of Atlantic Ocean," they did pretty well. Hayden, too, was impressed by the view: "Probably there is no portion of the world, accessible to the traveling public, where such a wilderness of lofty peaks can be seen within a single scope of the vision." (*Hayden Report, 1873,* p. 40.)

Shown on *Map of the Route of the Southern Continental R.R. . . . Made in 1867 & 1868* under the direction of Gen. Wm. J. Palmer, accompanying *Reports of Surveys Across the Continent, in 1867-'68,* by Gen. Wm. J. Palmer, Philadelphia, 1869.

LIZARD HEAD (13,113) *San Miguel Range*

The name was probably given by early prospectors, for when it first appears in print it is spoken of as an established name. In the Hayden Survey reports, for instance, under date of September 6, 1874: "In line with the peak [Mount Wilson], but several miles nearer, appeared Lizard's

Head, a peculiar pinnacle, which from this point of view appears quite broad." (*Report, 1874,* p. 476; *Bulletin No. 3,* p. 190.) On September 11: "From here Lizard's Head, east of Mount Wilson, stood up like a high monument on the top of a mountain-peak. From this view the width of the base bears about the same relation to the height as in the great artificial monuments." (*Report, 1874,* p. 483; *Bulletin No. 3,* p. 194.) And again, September 13, from the summit of Mount Wilson: "Lizard's Head, a few miles east of us, formed a very prominent feature of the landscape, although, looking at it from our elevation, its height did not show. From this direction it appears quite broad, from the fact that its greatest length is from south to north." (*Report, 1874,* p. 485; *Bulletin No. 3,* p. 199.)

It is also mentioned by Lieutenant William L. Marshall in his report for 1875, in *Wheeler Report, 1876,* p. 99: "Two miles east of this great peak [Mount Wilson] is a strange freak of nature. This is a thin column of trap-rock, about 230 feet in height, shooting vertically from a rude cone, forming a slender and well-proportioned column, with rounded summit, cleft in twain to a depth of perhaps 10 feet. Its summit offers a fine point for triangulation, with the single objection that it cannot be ascended."

"The most difficult of Colorado's summits to reach. In fact the rottenness of its 400-foot rock tower makes safety too much a matter of luck for comfort. . . . The only route to date has been that pioneered by Albert R. Ellingwood and J. Barton Hoag in 1920." (*Ormes: Guide,* p. 146.)

Ellingwood's account, "First to Climb Lizard Head," (*Outing,* November, 1921, Vol. 79, No. 2), contains a close-up description of the tower. "The rock is almost as long as it is high, but probably does not exceed 125 feet in thickness at any one point. Only when seen from either side (necessarily from a distance) does it to any degree justify its name, and the writer must confess that even then he thinks its resemblance to a saurian's head not over-strong. A striking feature . . . is the slender pinnacle that springs from a small ledge below and to the northwest of the summit, the 'Finger' we called it, and it seemed raised in warning. . . ." On the ascent, Ellingwood, the more experienced climber, led most of the way. A few iron spikes were used, with a 200-foot rope. "The actual summit is quite small and the rocks are ready to slide off on every side. There was no sign that anyone had been before us." The descent brought unexpected problems. "My plan was to pull the loose end of the rope around the rock, loop it again over the spike to which I now clung, and then drop on down to the first anchor of the day. But, alas, the rope would not come. I shook it violently to loosen it—and then something else came. A stone as large as my fist suddenly shot off the brow and landed squarely

on the top of my head." It was a narrow escape. Hoag was also hit—and both were lucky to get off alive. The date, as deduced from the narrative, was August 28, 1920.

The second ascent, by Harold G. Wilm and Dobson West, was made June 9, 1929. "We looked for and soon found the beginning of Mr. Ellingwood's route—an almost perpendicular, shallow gully on the southwest face. . . . It appeared to us to offer the only possible means of attack. The going was extremely slow and treacherous because of the rottenness and steepness of the cliff. . . . I found and tossed down Mr. Ellingwood's rope, which he was forced to leave behind on his descent." They found three of Ellingwood's spikes still in place, one of them too rusty and shaky for use. (Harold G. Wilm: "The Second Ascent of Lizard Head," *T. & T.*, August, 1929.) The third and fourth ascents were made in 1931 by Dean Peabody and Winthrop Means, of the Appalachian Mountain Club, August 22, and Dwight G. Lavender and John Seerly, of the Colorado Mountain Club, the following day. (*Appalachia,* December, 1931; *T. & T.*, October, 1931.)

LONGS PEAK (14,255) *Front Range*

On June 30, 1820, the members of Major Stephen H. Long's expedition, traveling westward up the gradual slope of the plains, "were cheered by a distant view of the Rocky Mountains." "For some time," writes the twenty-three year old botanist, Edwin James, "we were unable to decide whether what we saw were mountains, or banks of cumulous clouds skirting the horizon. . . . Our first views of the mountains were indistinct, on account of some smokiness of the atmosphere, but from our encampment, at noon, we had a very distinct and satisfactory prospect of them. . . . Snow could be seen on every part of them which was visible above our horizon. . . . Towards evening the air became more clear, and our view of the mountains was more satisfactory, though as yet we could only distinguish their grand outline, imprinted in bold indentations upon the luminous margin of the sky. We soon remarked a particular part of the range divided into three conic summits, each apparently of nearly equal altitude. This we concluded to be the point designated by Pike as the highest peak." (*James-Thwaites,* Vol. 2, pp. 264-271.) What they saw was not Pike's "Highest Peak," but the even higher peak soon to be named for the leader of the expedition, *Longs Peak.* A similar account by Captain John R. Bell, styled the "Official Journalist" of the expedition, adds: "Dr. James and Mr. Peale with two men, set out on foot to go to the base of the mountains . . . [They] returned, having experienced a hard day's travel, without reaching the base

of the mountains—the distance was much greater than they anticipated." (*Bell Journal,* pp. 146-147.) The movements of the expedition are summarized in "Major Long's Expedition to Colorado," by Roger W. Toll, *T. & T.,* January, 1924.

On Long's maps—both the manuscript, 1821, in the National Archives, (*Wheat,* No. 343), and the engraved map in *James, 1823* (*Wheat,* No. 353)—the peak is shown merely as "Highest Peak." By 1829, however, Long's name had become firmly attached to it, as shown by the Tanner map of that date (*Wheat,* No. 390). It is interesting to note that on the Disturnell "Treaty Map" it appears as "Cumbre de Long." By a ruling of the U. S. Geographic Board it is "Longs . . . not Long's." *(Fifth Report, 1921.)*

Stephen Harriman Long (1784-1864), native of New Hampshire and a graduate of Dartmouth College, was commissioned in 1814 2nd Lieutenant of Engineers. In 1816 he was made brevet Major of Topographical Engineers, and in 1826 brevet Lieutenant-Colonel. He attained the permanent rank of Major in 1838, Colonel in 1861, and retired in 1863. Following his expedition to the Rocky Mountains, and another to the sources of the Mississippi in 1823, he devoted most of his time to railroad engineering.

Not until the 1860s were serious attempts made to climb the mountain. Various parties reported that they had accomplished the feat; but it turned out that they had not reached the highest point. (*Hart, 1931,* pp. 32-33.) William N. Byers, in 1864, was one of these. He was later rewarded by being a member of the party that unequivocally made the first ascent. This was accomplished August 23, 1868, under leadership of Professor John Wesley Powell, of Illinois Wesleyan University, soon to become famous for his Grand Canyon expeditions, perhaps the only one-armed man to make the first ascent of a major mountain—he had lost an arm at the battle of Shiloh. Next to Powell, the hero of the Longs Peak climb was young L. W. Keplinger, also of Illinois Wesleyan (Class of '68), who made a semi-nocturnal reconnaissance. "It seemed useless for the entire party to waste its time the next morning if the place on the mountain was impassible. So I set out, leaving blanket and barometer and other impedimenta behind. When I got to the difficult place I found a way around it, but there was another a little farther which seemed doubtful, so I went on and found a way past that also. There was the summit, temptingly near. I was closer than any mortal had ever been before!" He kept on, but not to the top. "A lonesome feeling came over me. I started back." Darkness overtook him. "Major Powell had sent Jack Sumner up the mountain carrying bundles of dry sticks to kindle beacon fires. To see his fires and

hearing him hallooing were pleasant incidents of the return trip. It was about ten o'clock when I reached camp." (L. W. Keplinger, "The First Ascent of Long's Peak," *The Trail,* June, 1919, Vol. 12, No. 1.)

The earliest account, written by Byers, appeared in the *Rocky Mountain News,* September 1, 1868, immediately after the return of the party. "August 23—Unexpectedly the day dawned fair, and at six o'clock we were facing the mountain. Approaching from the south, our course was over a great rockslide and then up a steep gorge, down which the broken stone had come. In many places it required the assistance of hands, as well as feet, to get along, and the ascent at best was very laborious. There was no extraordinary obstacle until within seven or eight hundred feet of the summit. Above that point the mountain presents the appearance, in every direction, of being a great block of granite, perfectly smooth and unbroken. Close examination, however, removed this delusion in some degree, and we were most agreeably surprised to find a passable way, though it required great caution, coolness, and infinite labor to make headway; life often depending upon a grasp of the fingers in a crevice that would hardly admit them. Before ten o'clock the entire party stood on the extreme summit without accident or mishap of any kind." (Reprint in *The Trail,* October, 1914, Vol. 7, No. 5.)

"Professor Powell, two or three of his assistants, and Mr. Byers, of the Denver News, who knows all these mountains better than any other man, probably, have just accomplished the ascent of Long's Peak. . . . They had a terribly hard climb of it, but felt amply paid in the glory of the fact, and more in the glory of the landscape spread before them at the summit." (*Bowles,* pp. 82-83.)

Besides Powell, Byers, and Keplinger, four others made the first ascent: Walter H. Powell, the Major's brother; Samuel Garman, a student at Illinois State Normal University; Ned E. Farrell, packer and guide; John C. Sumner, brother-in-law of Byers, who kept a trading post in Middle Park. (*The Professor Goes West,* edited by Elmo Scott Warren, Bloomington, Illinois, 1954; *Powell of the Colorado,* by William Culp Darrah, Princeton, 1951.)

Longs Peak has a substantial bibliography, from which the following titles are selected as of special note: Roger W. Toll, *Mountaineering in the Rocky Mountain National Park,* 1919; Enos A. Mills, *The Story of Estes Park and a Guide Book,* 1905 and later editions, expanded as *The Rocky Mountain National Park,* 1924; Paul W. Nesbit, *Longs Peak, Its Story and a Guide For Climbing It,* 1946, and second edition, *Longs Peak, Its Story and a Climbing Guide,* 1953; Frederick H. Chapin, *Mountaineering in*

Colorado, The Peaks About Estes Park, 1889; John L. Jerome Hart, *Fourteen Thousand Feet,* 1925, second edition, 1931; many articles in *Trail and Timberline.*

MAROON PEAK (14,126) *Elk Mountains*

"As we go toward Maroon Mountain the bright red sandstones become darker. Maroon Mountain derives its name from the color of its rocks. We did not ascend it, but made a station on a high point a short distance south of it." (A. C. Peale, in *Hayden Report, 1873,* p. 260.) This peak is so named for its peculiar color, that of the sandstones of which it is composed. It is one of the highest peaks in the system, and its summit is nearly, if not quite, inaccessible." (Henry Gannett, in *Hayden Report, 1874,* p. 418.) Also known as Maroon Bells.

"Although the Land Office surveyors may have climbed Maroon during their surveys of 1881-83, it is possible that the first ascent was by Mr. C. P. Wilsson of Pueblo, sometime in the nineties." (*Hart, 1931,* p. 47.) Percy Hagerman made a solo ascent in 1908. (*Hagerman: Notes,* p. 16.)

OXFORD, MOUNT (14,153) *Sawatch Range*

"The Atlas of the Hayden Survey shows an unnamed mountain with three summits of 14,000 feet altitude north and east of Mount Harvard. It is a distinct mountain from Mount Harvard, both in respect of the distance separating the two and the depth of the gap between them. The mountain has never been named and does not seem to be well known. Albert R. Ellingwood and Stephen H. Hart took sights on it with a transit from the summits of Mount Harvard and Mount Columbia in 1925, and to them it appeared to exceed 14,000 feet in elevation. As the peak should have a name, preferably one similar to the other peaks of this group, I designate it herein as Mount Oxford in honor of the University attended by the above climbers who first directed attention to this peak." (*Hart, 1931,* p. 19.)

The association with Oxford University is emphasized by the following data: Alfred R. Ellingwood (1888-1934) attended Oxford as a Rhodes scholar, 1910-1913, receiving the degree of Bachelor of Civil Law; he was a member of the American Alpine Club as well as of the Colorado Mountain Club. "Persons interested in climbing in Colorado cannot fail to recognize that Dr. Ellingwood contributed more to the sport of mountaineering in Colorado than any other person." (Memorial in *T. & T.,* June, 1934.) Stephen H. Hart received the B.A. degree from Oxford, 1932, and M.A., 1938; he is a member of A.A.C. (V.-P., 1956-58), and C.M.C. John L.

Jerome Hart, brother of Stephen, who proposed the name, also attended Oxford as a Rhodes scholar, receiving the degrees of B.A., 1927, B.C.L., 1928, and M.A., 1932; he, too, is a member of A.A.C. and C.M.C., and of The Alpine Club (England).

PIKES PEAK (14,110) *Front Range*

At two o'clock in the afternoon of November 15, 1806, Captain Zebulon M. Pike, traveling westward up the Arkansas River, caught a glimpse of the peak that now bears his name. "I thought I could distinguish a mountain to our right, which appeared like a small blue cloud; viewed it with the spy glass, and was still more confirmed in my conjecture, yet only communicated it to doctor Robinson, who was in front with me, but in half an hour, they appeared in full view before us. When our small party arrived on the hill they with one accord gave three *cheers* to the *Mexican mountains.*" (*Pike, 1810,* p. 163; *Pike-Coues,* Vol. 2, p. 444; *Pike-Hart & Hulbert,* p. 118.)

Ten days later Pike's party of explorers reached the base of the range and made an attempt to climb the mountain. On November 26 they made a cold camp in a cave "without blankets, victuals or water," and on the following morning "arose hungry, dry, and extremely sore, from the inequality of the rocks, on which we had lain all night, but were amply compensated for toil by the sublimity of the prospects below." Presently they found that they were not even on the main mountain, for the summit "now appeared at the distance of 15 or 16 miles from us, and as high again as what we had ascended, and would have taken a whole day's march to have arrived at its base, when I believe no human being could have ascended to its pinical. This with the condition of my soldiers, who had only light overalls on, and no stockings, and every way ill provided to endure the inclemency of the region . . . determined us to return." (*Pike, 1810,* pp. 168-169.) An attempt was made by Pike and Dr. Robinson to measure the altitude: "The perpendicular height of the mountain from the level of the prairie, was 10,581 feet, and admitting that the prairie was 8000 feet from the level of the sea, it would make the elevation of this peak 18,581 feet." (p. 171.)

Pike's maps are the first to show the southern Rockies of Colorado, at least by the hand of one who had seen them. On a small sketch-map (*Wheat,* No. 287) found in the Mexican archives among papers confiscated when Pike was arrested in Mexican territory and discovered more than a century later, there is shown a range labeled "Mountains of N. Mexico"; and on another map (*Wheat,* No. 238) in *Pike, 1810,* the "Highest Peak"

stands out boldly. In 1819 there was published an immense map, more than five feet square (*Wheat,* No. 234) made by Dr. John Hamilton Robinson. "Here the name of the explorer is boldly placed on this great peak by the friend who was with him and helped measure it, the earliest public use of the name." (*Wheat,* Vol. 2, p. 71.)

For a time, however, Pike's name was obscured by the intervention of another. After Major Long's expedition of 1820 (see: LONGS PEAK) had discovered that the high peak they had first seen was not Pike's "Highest Peak," they proceeded along the base of the Rockies to the vicinity of Colorado Springs and there beheld the peak that Pike had told about. This time the attempt to climb it was successful. There are two contemporary accounts, one by Edwin James (see: JAMES PEAK), who led the ascent; the other by Captain Bell, whose manuscript journal, now in the library of Stanford University, lay for a long time unpublished. According to Dr. James, early in the morning of July 13, 1820, he set out with four men, "two to be left at the foot of the mountain to take care of the horses, and two to accompany him in the proposed ascent to the summit of the peak." They found the first day's travel extremely fatiguing, and at sunset they could not find "a piece of even ground large enough to lie down upon." They passed an uneasy night. At daylight on the 14th they continued the ascent. "The day was bright, and the air nearly calm. . . . We found the trees of a smaller size, and more scattered in proportion to the elevation at which they grew; and arrived at about twelve o'clock at the limit above which none were found. . . . At about two o'clock we found ourselves so much exhausted as to render a halt necessary. Mr. Wilson, who had accompanied us as a volunteer, had been left behind some time since, and could not now be seen in any direction. . . . We now found it would be impossible to reach the summit of the mountain, and return to our camp of the preceding night, during that part of the day which remained; but as we could not persuade ourselves to turn back, after having so nearly accomplished the ascent, we resolved to take our chances of spending the night on whatever part of the mountain it might overtake us. Wilson had not yet been seen; but as no time could be lost, we resolved to go on as soon as possible to the top of the peak, and look for him on our return. . . . It was about four o'clock P.M. when the party arrived at the summit. . . . We had not been long on the summit when we were rejoined by the man who had separated from us, near the outskirts of the timber. He had turned aside and lain down to rest, and afterwards pursued his journey by a different route. . . . At about five in the afternoon the party began to descend, and a little before sunset arrived at the commencement of the

timber; but before we reached the small stream at the bottom of the first descent, we perceived we had missed our way. It was now become so dark as to render an attempt to proceed extremely hazardous; and as the only alternative, we kindled a fire, and laid ourselves down upon the first spot of level ground we could find." The next day they arrived a little after noon at the boiling springs, where they "indulged freely in the use of its highly aërated and exhilarating waters." (*James-Thwaites,* Vol. 3, pp. 11-23.)

The account by Captain Bell is briefer, but of interest because it gives the names of the two men who made the ascent with James: "About seven o'clock P.M. Dr. James & party returned from the mountains, the Dr. with two of the men (Wilson & Verplank) having visited the sumit of the Peake—he states, that on the north side of the mountain above the line of vegetation, was abundance of snow & particles of ice, that ravines, which appeared to be of great depth was filled with snow, the mercury stood at 44° on the top of the mountain, that when clouds passed over, shielding them from the rays of the sun, they experienced all the chills of a winter day in a northern latitude—they were two days in ascending & descending the mountain." (*Bell Journal,* p. 167.) A few days later "the commanding officer announced the following compliments, by naming the high Peake, 'James Peake' believing him to have been the first American that ever ascended to its summit. To the springs, discovered at the foot of the mountain of the Arkansas, the name of 'Bell's Springs'." (*Same,* pp. 177-178.)

After he returned to Washington, Long prepared a manuscript map (*Wheat,* No. 343) now in the National Archives, on which is shown "James' Peak"; the name also appears on a smaller engraved map (*Wheat,* No. 353) in *James, 1823.* The latter was a very influential map and the name "James Peak" was copied from it for a long time. Nevertheless, explorers continued to speak of it as the one that Pike discovered and eventually his name found itself back on the maps. Colonel Henry Dodge appears to be the first to make the restoration. In *Journal of the march of a detachment of dragoons under the command of Colonel Dodge during the summer of 1835* (*Wagner-Camp,* No. 63), it appears both in the text and on the accompanying map (*Wheat,* No. 411). (See, also: *Wheat,* Vol. 2, p. 149, and *Hart, 1931,* p. 9.) One of the best of the early maps of the West is that of David H. Burr, 1839 (*Wheat,* No. 441). Here we find two peaks not far apart, one labeled "James," the other, a little to the south, "Pikes." Emory's map, 1844, (*Wheat,* No. 478), repeats this duality. Finally, on the Fremont-Preuss maps of 1845 and 1848, (*Wheat,* Nos. 497 and 559), Pike's name stands alone upon his famous landmark, there to

remain unchallenged. One deviation is worthy of note: on the *Disturnell "Treaty Map"* of 1847 the peak appears as "Cumbre de Jaime."

Zebulon Montgomery Pike (1779-1813), born in New Jersey, entered the army at the age of fifteen, was commissioned 2nd Lieutenant, 1799, Captain, 1806; then was promoted rapidly to Major, Lieutenant-Colonel, Colonel, and March 12, 1813, to Brigadier General. A month and a half later he was killed in action. "He enjoyed among his superiors a well-earned reputation for boldness, enterprise, and fitness to command. He inspired all men under him with confidence in his ability." (*Pike-Hart & Hulbert,* p. xlvi.)

The history of Pikes Peak is replete with incidents and there is an extensive bibliography. Two recent items are noted as additions to previously published lists: *A Bloomer Girl on Pike's Peak, 1858. Julia Archibald Holmes, First White Woman to Climb Pike's Peak,* edited by Agnes Wright Spring, Denver, 1949; and *Pikes Peak Atlas,* by Robert Ormes, Colorado Springs, 1960.

PRINCETON, MOUNT (14,197) *Sawatch Range*

"Mount Princeton, situated a little to the north of Chalk Creek . . . tapers off to a very fine point." (F. M. Endlich, in *Hayden Report, 1873,* p. 336.) The name may have been given by Henry Gannett, who was with the Hayden Survey in the summer of 1873, later Chief Geographer of the U.S.G.S. The peak is shown on the 1873 map as not occupied. The Wheeler Survey called it "Chalk Peak," and it is so shown on the Wheeler map, No. 61(B), prepared by Lieutenant William L. Marshall from results of expeditions in 1873-1875. It is possible that Marshall or his assistants climbed this peak in 1873, for he says in his report that "during the season thirty-six peaks, over 13,000 feet in height, were occupied." (*Wheeler Report, 1874,* p. 10.) In 1907 the U.S.G.B. ruled: "Mount Princeton . . . not Chalk." *(Third Report.)*

In the summer of 1877 a group of Princeton students and professors visited Colorado. One of the students, William Libbey, Jr., who had just received his degree, climbed Mount Princeton solo. "July 17 . . . L. set off early for Mount Princeton, a very beautiful and symmetric mountain immediately west of our camp. L. found no particular difficulty until within 1500 feet of the top, when his only way led over a bed of *débris* such as he had never experienced before; the size of the boulders being such that nothing but the hardest sort of crawling would answer. The summit was, however, reached at 12:30 P.M., and several patriotic demonstrations gone through with." (*Princeton Report, 1877,* diary, p. 12; see, also: "Princeton Boys in the Rockies," by Louisa Ward Arps, in *T. & T.,* July, 1942.)

William Libbey (1855-1927) was afterwards Professor of Physical Geography and Director of the Museum of Geology and Archaelogy at Princeton. He was a member of the American Alpine Club (*A.A.J.*, 1947, 6:3, pp. 374-375).

SNEFFELS, MOUNT (14,150) *San Juan Mountains*

"Mount Sneffels, with the pinnacles and peaks that flank it, is queen of the San Juan and most beautiful of the mountain massifs." (*Ormes: Guide,* p. 67.)

"On July 14, 1874, the San Juan or third division of the United States Geological and Geographical Survey left Denver for the field. It consisted of A. D. Wilson, topographer, directing; F. Rhoda, his assistant; F. M. Endlich, geologist; and Mr. Gallup, for a short time." (*Hayden Report, 1874,* p. 9.) Rhoda wrote a narrative of the expedition, "Report on the Topography of the San Juan Country," which appeared first in *Hayden Bulletin No. 3,* and subsequently in *Hayden Report, 1874.* The text is essentially the same in both, but two fine panoramas by Rhoda are in the *Bulletin* only; there are slight differences in illustrations and maps. A feature of Rhoda's narrative is a detailed account of the first ascent of Mount Sneffels, September 10, 1874, from which the following passages are taken: "Immediately in front of us was a curious depression, which, at its lowest point, was about 2000 feet below us, although we were standing on the lowest part of the ridge surrounding it. It covered several square miles in area; it seemed to be completely closed up, as no outlet could be seen. . . . Almost due east of us and across the sink, at a distance of three miles, was Mount Sneffels, the end and aim of our labors. . . . Near this point we were joined by Ford, one of the packers, who had concluded that he wanted to climb a peak, too, but had chosen this one, the hardest climb of the season. . . . All our labor was soon rewarded by the glorious view which presented itself to us when we reached the top. . . . We had reached the top about noon, and found that we could not possibly remain over two hours and expect to get to camp. . . . We reached camp at eight o'clock in the evening, having been fourteen hours from camp. . . . We had climbed up 7000 feet . . . traveling a horizontal distance of six miles, the whole over loose rock." (*Bulletin,* pp. 194-197; *Report,* pp. 480-483.)

Nothing is said in Rhoda's narrative about the naming of the peak, but the name appears throughout, as well as on one of the panoramas and on Wilson's "Preliminary Map of the San Juan Country." The circumstances of the naming, however, are brought to light through a visit to the peak fifteen years later by Frederick H. Chapin, of the Appalachian Mountain Club. In a paper read before the Club, June 11, 1890, Chapin tells of

meeting Dr. Frederic M. Endlich at Ouray and of their visit to the mountain together. "Looking immediately down upon the north side one sees a deep gulf which is described by Lieutenant Rhoda in Hayden's Report. This recalls the manner of naming the peak. Dr. Endlich was standing in the abyss with one companion, who compared it to the great hole described by Jules Verne in 'Journey to the Center of the Earth.' Endlich agreed with him, and pointing to the great peak above, exclaimed, 'There's Snaefell!' Thus the peak got its name, though it is pronounced by the people of the valley as Sneffels, and is so written on the maps, and in the tables of the Coast Survey. So it will be part of the effort of this paper to put on record the true designation, named after the Icelandic mountain Snaefell, lest erelong the grand summit be called 'Sniffels'." (Chapin, "The San Juan Mountains," *Appalachia,* December 1890, 6:2, p. 161; also, with slight differences, in *The Land of the Cliff-Dwellers,* by Frederick H. Chapin, Boston, 1892, pp. 92-93.) But, alas, Chapin's erudition did not extend far enough; for, as both Hart and Toll have pointed out (*Hart, 1925,* pp. 24-25), Endlich and his companion were not thinking of the Icelandic peak, but of Jules Verne's novel. Chapin is right, of course, about the Icelandic spelling. But Jules Verne was not concerned with that, he was writing a novel, and adapted the unwieldy "Snaefellsjökull" to meet his needs for his cryptogram: *"In Sneffels Yoculis craterem . . . descende,"* in French, "Descends dans le cratère du Yokul de Sneffels." So *Sneffels* it is, Chapin to the contrary notwithstanding; and so it has remained on all maps and in all accounts since the days of Wilson, Rhoda, and Endlich.

Another error is charged to Chapin—Rhoda was not a "Lieutenant," or an officer of any kind. Franklin Rhoda (1854-1929) was the son of Frederick Rhoda, a native of Germany, and Elizabeth Donaldson Wilson Rhoda, who by a previous marriage had two sons, one of whom was Allen D. Wilson (see: MOUNT WILSON), At the time of his climb of Mount Sneffels Rhoda was twenty years old. He had graduated the year before in the first class of the new University of California. After a few years on his father's fruit ranch in Alameda County—the ranch gave the name to the present *Fruitvale*—he entered San Francisco Theological Seminary and in 1889 was ordained a minister of the Presbyterian Church. Following several other pastorates in California he became pastor of the Fruitvale Presbyterian Church. He died September 10, 1929, fifty-five years to the day after his ascent of Mount Sneffels. (*Oakland Tribune,* September 11, 1929.)

The Wheeler Survey, also, conducted operations in the San Juan Mountains in 1875 (Report of Lieutenant William L. Marshall, in *Wheeler*

Report, 1876) and, following the good old Army custom of the times, paid no attention to the civilian work of the rival Hayden Survey, just as Hayden with an air of professional superiority ignored Wheeler's efforts. In the present instance, the Hayden party may have overlooked a local name that Marshall was aware of, for in the latter's report *Blaine's Peak* is used as if it were an established name, doubtless derived from a miner whose name is perpetuated in the *Blaine Mine* to the north of the peak. At all events, the Hayden name has been officially established by the U.S.G.B. *(Fifth Report, 1921).*

SNOWMASS MOUNTAIN (14,077) *Elk Mountains*

"The amphitheater, on the eastern face of Snow Mass, contains an extensive snow-field, the largest I have ever seen of any peak in the Rocky Mountains. It is from this snow-field that the mountain was named." (Dr. A. C. Peale, in *Hayden Report, 1873,* p. 261.) "Two and three-tenths miles south of [Mount Daly] on the main ridge is the summit which has been named Snowmass Mount. . . . It has received its name from an immense field of snow on its eastern face." (Gannett, in *Hayden Report, 1874,* p. 418.)

"In the distance we have seen two mountains which are temporarily called Snow Mass and Black Pyramid. The first of these we are now ascending. It is a terribly hard road to travel. The slopes consist of masses of immense granite fragments, the rock-bed from which they came appearing only occasionally. When we reach the crest, we find it also broken and cleft in masses and pillars. Professor Whitney ingeniously reckons that an industrious man, with a crow-bar, could, by a week's industrious exertion, reduce the height of the mountain one or two hundred feet. Some of the members of the expedition amuse themselves by the experiment, toppling over great fragments, which thunder down the slopes and furrow the wide snow-fields below. It is this snow-field which forms the characteristic feature of the mountain as seen in the distance. There is about a square mile of unbroken white, and lower down still, a lake of blue water." (W. H. Rideing, in *Picturesque America,* Vol. 2, p. 502.)

On the preliminary map in *Hayden Report, 1873,* Snow Mass Mountain is shown as occupied, but there is nothing in the text to indicate the date or who occupied it, other than scattered remarks. From these, however, we may deduce that the date was in August and that a fairly large party went to the top. Hayden, himself, was doubtless one of them, for he describes the view and remarks on "a vast glacier-like mass of snow and ice, from which, at this season of the year (August), water is flowing rapidly."

(*Hayden Report, 1873,* pp. 66-67.) Whether Henry Gannett and James T. Gardiner were there is not clear, but either or both might have been. Dr. Albert C. Peale was undoubtedly on the summit, as shown by his description quoted above. Two others are identified by the account in *Picturesque America:* William Henry Rideing (1853-1918), a young Englishman who was just beginning a successful career in writing (*Springfield Republican, New York Tribune, New York Times, Youth's Companion,* etc.); and William Dwight Whitney (1827-1894), Professor of Comparative Philology at Yale (brother of Josiah Dwight Whitney of the California Survey), of whom Hayden remarks that he "rendered most valuable assistance to Mr. Gardner in his geographical work, for the months of July and August, without compensation from the Government." (p. 8.)

SOPRIS, MOUNT (12,823) *Elk Mountains*

"Sopris was named at least as early as 1865 for Captain Dick Sopris, mayor of Denver." (Note by Edmund B. Rogers in *Brewer Letters.*) The name appears on the *Ebert-Gilpin Map, 1865,* in fact one of the very few mountain names to be found on that map. Captain Richard Sopris came to Colorado in 1868 and was a member of the first Territorial Legislature. He was elected mayor of Denver in 1878 and again in 1879. He died in 1893. A daughter, Mrs. Indiana Sopris Cushman, was "Colorado's First Woman School Teacher." (Thomas F. Dawson, in *The Colorado Magazine,* July, 1929.)

"This mountain was named by a party led to the area in 1860 by Captain Richard Sopris." (*Rocky Mountain News,* Jan. 20, 1957, p. 55.—James Grafton Rogers.)

"Dr. Peale, who climbed Sopris peak from this side in 1873." *(Hayden Report, 1874.)*

UNCOMPAHGRE PEAK (14,306) *San Juan Mountains*

"Uncompahgre; river and mountain in Colorado. Derived from the Indian, *unca,* 'hot'; *pah,* 'water'; *gre,* 'spring'; 'hot water spring'." *(Gannett: Place Names.)* The mountain derived its name from the river (*Hart, 1925,* p. 23; *1931,* p. 28.)

Probably the earliest recorded mention of the name is in Escalante's diary of his journey in 1776. "We finished our descent from the sierra and reached the banks and the meadows of the Río de San Francisco, by the Yutas called Ancapagari (which according to the interpreter, means Laguna Colorado) because near its source there is a spring of red water, hot and bad tasting." *(Bolton: Escalante.)*

The Hayden Survey party (Wilson, Rhoda, Endlich) approached the mountain in August, 1874. "A few miles northwest of this group Uncompahgre Mountain appeared, presenting on its north side the peculiar precipice which distinguishes it from all the surrounding peaks. . . . From this plateau we got the grandest view of Uncompahgre obtained from any station during the summer. The full height of the great precipice stood out in clear profile. . . . As yet it had never been ascended by any one, and we felt that to reach the summit might be beyond the range of the possible. . . . We started out the next morning [August 7], expecting to have a very difficult climb. We were terribly taken aback, however, when at an elevation of over 13,000 feet, a she grizzly, with her two cubs, came rushing past us from the top of the peak. Contrary to all expectations, we found the ascent very easy, and arrived on the summit at 7:30 A.M., having been two hours and a half in climbing up 2400 feet. We found that the bears aforesaid had been all over the summit of the peak, though how they got over one or two short but steep passages in the ascent, puzzled us not a little. . . . Just before we left the summit, clouds came along, and we were soon enveloped. It was at this time that we experienced, for the first time in the season, the electrical phenomena which later interfered so much with the topographical work." (Franklin Rhoda, "Report on the Topography of the San Juan Country," in *Hayden Report, 1874,* pp. 452-453; *Hayden Bulletin No. 3,* pp. 166-167.)

The Wheeler Survey was also active in this area, following close upon the heels of the Hayden party. Shortly after August 24 Lieutenant William L. Marshall and his assistant Louis Nell "proceeded to the Uncompahgre Peak, which we occupied as a primary point, spending upon its summit two entire days." (*Wheeler Report, 1875,* p. 38.) In his report for the following year Marshall recalls a lively episode: "In 1874 a large cinnamon bear and her cub were found sportively tumbling and rolling from the summit of Uncompahgre at this point, and came near occasioning the loss of our theodolite and of one of the packers who was carrying it. Just as he was raising his head above the ledge the bear happened to be about to look down over the same place and both animals, each rather disconcerted at the proximity of the other, tumbled off the cliff together. Both bear and packer, however, happily escaped further injury than a good fright and a few bruises." (*Wheeler Report, 1876,* p. 94.)

WILSON, MOUNT (14,246) *San Miguel Range*

"Only one peak of which we had any dread remained yet to be ascended, and that was Mount Wilson. From various circumstances we had reason to

believe that this was higher than any station we had yet made, and from its rugged appearance we dreaded its ascent not a little. . . . September 13 was devoted to climbing the great mountain. . . . When we had reached an elevation of about 13,000 feet, we noticed three mountain sheep on the top of a high ridge to the north of us, and about 1000 feet above us. . . . A little farther on we came to a large steep snow-bank, up which we climbed with difficulty, cutting notches in the snow for foot-holds. At the upper end of this we came to what was much worse, very steep and dangerous rock-walls. [There follows a spirited account of the climb.] Once over this we climbed out of the crevasse without difficulty and gained the longed-for summit." (Franklin Rhoda, in *Hayden Report, 1874,* pp. 483-484; *Hayden Bulletin No. 3,* pp. 197-198.) The party consisted of Allen D. Wilson, Franklin Rhoda, and Frederic M. Endlich.

A party of the Wheeler Survey was in the area a month later and made the second ascent of Mount Wilson. "From Trout Lake we moved west, and struck the valley of the Dolores, and camped for one day near the foot of the Glacier Peak (since named Meigs Peak) of the San Miguel range, which the topographer of the party, Mr. Spiller occupied with partial success." (Report of Lieutenant C. W. Whipple for season of 1874, in *Wheeler Report, 1875,* p. 45.) "Between the Dolores and the San Miguel is a detached group of high peaks, three of which exceed 14,000 feet in height, hitherto called the Sierra San Miguel. . . . This group reaches its greatest height in a massive peak, with extensive fields of snow on its northeastern flank. This peak was ascended in 1874 by Mr. Spiller, and in our notes was called Glacier Point. Mr. Wilson, of the Geological Survey of the Territories, also ascended it, and called it Mount Wilson." (Report of Lieutenant William L. Marshall for season of 1875, in *Wheeler Report, 1876,* p. 99.)

Mount Wilson, in Dolores County, is shown as 14,246 ft. on the U.S.G.S. 1953 Mt. Wilson quadrangle; there is a Wilson Peak, 14,017 ft., in San Miguel County, two miles north. The Geographic Board named the latter "Franklin Delano Roosevelt Peak" but nobody uses the name. (James Grafton Rogers.)

"Wilson; mountains in Colorado and Utah, named for A. D. Wilson, topographer." *(Gannett: Place Names.)* "Wilson: peak (Mount Wilson) . . . Not Glacier Mountain." *(U.S.G.B.,* Sixth Report, 1933.)

Allen Davis Wilson was born in Illinois in 1844. He came to California at the age of six with his mother and step-father Frederick Rhoda. He was educated at Oakland College, later to become the University of California. He was with the California State Geological Survey under J. D. Whitney

for two years, then with the Survey of the Fortieth Parallel under Clarence King. He assisted King in exposing the Diamond Fraud of 1872. In 1873 he joined the Hayden Survey and worked with James T. Gardner (Gardiner) whom he succeeded as Chief Topographer. He continued with the Hayden Survey until the consolidation of the surveys in 1879 as the U. S. Geological Survey. He later practiced as an independent engineer. He lived in Fruitvale, California, until his death in 1920. His mountain ascents in Colorado, Utah, and Wyoming were innumerable; in October, 1870 he accompanied Samuel F. Emmons on the second ascent of Mount Rainier by the Gibraltar route. (*Davis' Commercial Encyclopedia of the Pacific Southwest,* Berkeley, 1914; Brewster, *Josiah Dwight Whitney, Life and Letters,* 1909; Thurman Wilkins, *Clarence King,* 1958; *A.A.J.,* 1957, 10:2, p. 10.)

Frederic Miller Endlich was born in Reading, Pennsylvania, in 1851. He was a mineralogist and chemist at the Smithsonian Institution from 1872 to 1880, and was subsequently a mining engineer. He died at Tucson, Arizona, in 1899. (George P. Merrill, *Contributions to the History of American Geology,* 1906.) (For Franklin Rhoda, see: MOUNT SNEFFELS.)

YALE, MOUNT (14,194) *Sawatch Range*

The four Harvard students who took part in the expedition to the Rocky Mountains in the summer of 1869 (see: MOUNT HARVARD) were led by two Yale men, Josiah Dwight Whitney '39 and William Henry Brewer '52. Whitney was at that time Professor of Geology at Harvard and Brewer Professor of Agriculture at Yale. Selecting two peaks, they "resolved to call one Mount Harvard, the other Mount Yale, after our respective universities." (*Brewer Letters,* p. 36.) "I had found a way to reach the peak we called Mount Yale; the next thing was to reach it. . . . Tuesday (August 17th) we started. . . . We had to repack our mules three times before we got them well arranged, for the mules were unaccustomed to it. I had to lead the most troublesome one. Now, to manage my horse, take care of a stubborn, awkward mule, and carry a barometer, and at the same time find my way up the rugged way, was no light work, but I carried it through. The boys had never seen horses mount such a trail before—now over fallen timber, then up a slope so steep that we had to zigzag up, stopping every few feet to let our animals get their wind in the light air of that height, then through brush, then over loose rocks where no one could be seen, then along the rocky crest, but *up, up,* until we passed the forests, then the gnarled, stunted growth of the upper tree limits, then up to the

rocky ridge far above this, 13,000 feet or more. Then we descended a thousand feet down the steepest of slopes and around rocks until we struck our camping place. . . . Above us towered Mount Yale, a sharp ridge of granite, sharply cut against the evening sky, rugged and rocky, with great masses of snow on it. . . . We were off at six (August 18), and before nine on the summit. . . . The morning had been cloudy, but it soon cleared up and we had a glorious day. . . . We remained on the top over four hours. Clouds came up and at last showers moved over the mountains, admonishing us to hasten away. . . . We hurried down and saw three bears, Rocky Mountain grizzlies, female and two half-grown cubs, feeding a few hundred feet below us." (*Brewer Letters,* pp. 38-39.)

The climbers were: Professor Whitney, Professor Brewer, William Morris Davis, S. F. Sharpless, and Robert Moore.

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In Memoriam

RAYMOND T. ZILLMER
1887-1960

Raymond T. Zillmer, prominent attorney and conservationist died on December 13, 1960. He was a graduate of the University of Wisconsin (A.B., 1910), where he also was granted law and doctor's degrees. During 1912-14 he was on the faculty, teaching political science. After 1914 he practiced law in the firm of Zillmer & Redford.

He was a member and past president of the Milwaukee County Bar Association, and a frequent contributor to legal publications. During World War I he served in the Judge Advocate Department of the Army. He was president of the City Club of Milwaukee, 1938-1940.

Zillmer joined the Alpine Club of Canada in 1931, was elected to the American Alpine Club in 1942, and was also a member of the Sierra Club. He had been president of the Izaak Walton League of Milwaukee, and in 1933 received the Broughton Award and was named "Man of the Year" by the Izaak Walton State League for his work in conservation in the development of the Kettle Moraine State Park. During the past two years he had devoted much time to an expanded concept of a Wisconsin Ice Age National Park. In his will he left funds for five shelters along the main hiking trail in the Kettle Valley State Forest.

Zillmer's only major ascents in the United States were Mount Rainier in 1924 and Longs Peak at a later date. He climbed Vignemale in the Pyrenees in 1936. Exploration and the elucidation of new country were more important in his eyes than mere climbing, and he carried out punishing journeys at an age when many another would have sought easier activity. In 1938, he and Lorin Tiefenthaler followed Alexander Mackenzie's trail in British Columbia from the Fraser River to Bella Coola on the coast. In 1941 they explored the northern part of the Monashee Range. Zillmer made four arduous expeditions in the Cariboo Range (1939-45-46-47), the last of these with his son, John, being the first crossing of the range lying east of the Raush River and the North Thompson. Mount Zillmer, in the Cariboos, bears his name.

His widow, two sisters, a son and a daughter survive him.

J. MONROE THORINGTON

JULIA GRINNELL
1888-1960

Love of the outdoors was foremost among the many attributes of Julia Grinnell. She loved to travel, too, and travel she did to many countries of the world to take part in mountain climbing, white-water canoeing and ornithological expeditions.

Her life had many interesting facets. She was born a New York Stater, then spent many winters in Palm Beach where her father was rector of Bethesda-by-the-Sea. She was in New York after the first World War broke out and used her training as a dietitian to go with the Y.M.C.A. to France and later to Germany with the armed forces. Back in New York she had a busy social and business life. In 1922 she joined the New York Chapter of the Appalachian Mountain Club, becoming a strong and popular walker. Later she became Secretary of the Chapter. She also joined the hardy Bemis Crew on winter climbs in the White Mountains. The Canadian Rockies then claimed her attention where she climbed Victoria, Lefroy, Temple and others. In the Swiss Alps, Julia showed herself to be a fine mountaineer on many climbs including the Matterhorn and the Grépon.

She was a most sociable person and her kind, warm, understanding personality endeared her to everyone. At her home in Ithaca, New York, she was associated with many civic organizations, serving at one time or another as president of the Women's Overseas League and American Women's Voluntary Services in their local chapters, and president of the Women's Alliance of the First Unitarian Society and of the Garden Club of Ithaca.

At an age when most people are thinking of retiring to less active hobbies Julia, as a partner with her husband Lawrence, engaged in a series of field trips involving ornithology and white-water canoeing which continued to the end of her life. On behalf of ornithology she acted as a camera assistant to her husband on trips to wild and out of the way areas of North, Central and South America, the West Indies, Africa, New Zealand and Australia. On the latter two trips she served with Lawrence as Research Associate of the Laboratory of Ornithology of Cornell University.

Wishing to share their good fortune with others they were always ready to show their beautiful bird pictures to interested groups. They must have traveled thousands of miles in doing this.

Canoes were a life long joy to Julia. She came by this love naturally, I think, because her father was one of the first members of the American Canoe Association. As a girl she canoed on the St. Lawrence and Oswe-

gatchie rivers in New York and on Lake Work in the winters at Palm Beach. After her marriage she acted as bow paddler for her husband on trips that were to cover a great many of the canoeable rivers in the northeastern United States, some in the west, and some in Europe. These trips continued over a period of more than twenty-five years, totalling some nine thousand miles. Only last summer she was one of a group who canoed down the beautiful Current River in Missouri.

E. L. WOOLF

WALTER LEROY HUBER
1883-1960

Walter Leroy Huber became a member of the American Alpine Club in 1919 and was Western Vice-President 1935-1937. He was born in San Francisco January 4, 1883; all four grandparents came across the plains as pioneers. After receiving his B.S. in engineering from the University of California in 1905 he served for a few years as District Engineer, U. S. Forest Service, before entering private practice as a Civil Engineer in San Francisco. He early became a member of the Sierra Club and always considered it one of the major interests of his life. From 1915 to 1948 he served continuously on its Board of Directors. He was President of the Club 1925-1927 and Treasurer for sixteen years before and after that time.

In his profession Walter Huber attained the highest rank. He did the engineering work for many important buildings, including several on the Berkeley campus of the University of California; he was particularly noted for his work on dams for hydroelectric and irrigation projects. His career was capped by the presidency of the American Society of Civil Engineers in 1952-53. In 1955, on the fiftieth anniversary of his graduation, he received the honorary degree of LL.D. from the University of California. In the field of conservation he was equally distinguished. Highly regarded as an advisor by Stephen T. Mather and Horace M. Albright, of the National Park Service, he later, 1953-1959, became a member of the Interior Department Advisory Board on National Parks and Monuments. This last service brought him back full cycle to one of his earliest achievements in conservation, the establishment, in 1911, of Devils Postpile National Monument, near Yosemite National Park, for which he furnished the data and drew the specifications.

Most of Walter's mountain-climbing experience was in the Sierra Nevada of California, for that was where his work took him. It was part of his business to know intimately the headwaters of all the rivers of the state, and in what better way could one do that than to climb mountains? And

in what more convenient way could that be done than by going on the Sierra Club outings? So for many years he was a familiar figure on these outings and many a Sierra Club member, including myself, gladly followed his leadership to the summits. None of his climbs were difficult by present standards—they were made before the days of pitons, or even the rope—but some, such as North Palisade, Middle Palisade, and Mount Williamson, were at the time considered good tests of mountaineering ability. Occasionally he went farther afield, to the Cascades and the Rockies, where he climbed, among others, Rainier and Resplendent. His exploration of the Little Colorado River was noteworthy and important professionally. As a photographer of the Sierra he takes his place with such masters as J. N. LeConte and Ansel Adams.

FRANCIS P. FARQUHAR

Climbs and Expeditions

UNITED STATES

Alaska

Meiji University Mount McKinley Expedition. The first of five expeditions to Mount McKinley was landed by Don Sheldon at about 8000 feet on the Kahiltna Glacier from the 9th to the 12th of April. This was from Meiji University, Tokyo, Japan, and was led by Takeichi Katano. Other members of the party were Susuma Takahashi, Mimuro, Doi, Suzuki, Takagi, Matsuda, Kaji, Higashi, Kobayashi, Katayanagi, Fujita, Takahashi and Kanazawa. Stormy weather in April prevented their establishing Camp III at 14,700 feet before May 3. The next day they fixed a 1000-foot rope on the steep slope at about 16,000 feet. A reconnaissance by Fujita, Doi, Mimuro and Takahashi on May 5 was turned into an ascent of the South Peak, although the weather was very bad. Camp IV was established at 17,000 feet on May 9 and a tent for two set up on Denali Pass on May 12. From there, Takahashi and Koyayashi climbed the North Peak the next day. On May 14 this pair was joined by Katano, Kanazawa, Fijita, Higashi and Matsuda. The two struck their tent and carried it with them as all of them climbed to the top. This same pair spent the night on the summit. All had descended to 10,200 feet by May 16.

Waseda University Mount McKinley Expedition. Don Sheldon flew the Japanese Waseda University group to the 8000-foot level on May 1 and 2. On May 6, from their 13,200-foot camp, they climbed the west buttress route as high as 14,100 feet and then crossed the snow plateau towards the western rim of the south face to choose a camp site at 14,600 feet. On May 8 they reconnoitered to 15,200 feet and found themselves on the route pioneered a year ago. (See *A.A.J.*, 1960, 12:1, pp. 1-9.) Mantaro Kito, Syunsuke Imamura, Masayuso Teratani and Yosihiko Kikusima prepared the route along the upper part of the western rim to 17,000 feet, while the leader Takamasa Yosizaka and Akira Yamamoto carried camp to 16,000 feet on the west buttress to act in support of the others. On May 13 the latter two climbed in cloudy weather through Denali Pass to the top of the shoulder where they expected their companions to emerge from the western

Note: All dates refer to 1960 unless stated otherwise.

rim route. Not finding them, they continued to what they thought was the top; not until they were considerably lower did they see that they had merely ascended a lesser summit. The next day the four on the western rim climbed to 19,000 feet, where at 10 P.M. they bivouacked. They climbed to the top of the shoulder at 19,500 feet on the 15th but descended immediately through Denali Pass by the west buttress route, looking for the support party. This expedition made no further attempt.

Anchorage Mount McKinley Expedition. Helga Bading, Andy Brauchli, Paul Crews and Rod Wilson were flown to 8200 feet on the Kahiltna Glacier on May 7 to join Chuck Metzger, who had been flown in the day before. On May 16 they established their sixth camp at 16,400 feet, just 200 feet below the Seattle party, which had overtaken them that same day. Because Helga Bading was suffering from the altitude (she was later evacuated in a coma by Don Sheldon, who made an incredibly difficult landing on a tiny plateau at 14,600 feet), they took some time deciding what to do and did not start for the summit until 10:40 A.M. of May 17. Paul Crews gives the following account of the ascent: "We passed the empty Day camp about 200 feet above ours. As we reached 17,000 feet and looked across the snowfield and saw the Day party about half-way up Denali Pass. We climbed behind them perhaps by an hour. They were following the Meiji markers and adding some of their own, so we had no trouble in following. At about six P.M. we reached and passed them, just below the final ridge and took our turn kicking and chopping steps. We finally reached the South Summit at 7:15 with the Day party right on our heels. The weather was clear, calm, −30° F. Susuma Takahashi and another member of the Meiji University group had previously carried a two-man Meade tent to the summit and camped overnight. They had also erected a new plastic pole at the summit and had flown from top to bottom flags in the following order: U. S., Japanese, Alaskan and Meiji University. It made quite a colorful display at the top of the continent." During the descent, the Anchorage group looked back at the Seattle party, which was at some distance below Denali Pass, and saw that they had slipped. They set in motion the rescue operation which will be adequately covered in *Accidents in North American Mountaineering, 1961.*

Pacific Northwest Mount McKinley Expedition. On May 17 John Day, Peter Schoening, and Lou and Jim Whittaker climbed to the summit of Mount McKinley by the west buttress route.

Bremerton Mount McKinley Expedition. The members of our group were Don Anderson, Jerry Koch, Jim Richardson, Roy Harniss, Jack Newman, Kent Heathershaw and Glenn Kelsey of Bremerton, Washington and Paul Williams of Seattle. We assembled on the Kahiltna Glacier at 6700 feet with 1500 pounds of food and supplies. We had been landed on the glacier at the McKinley National Park boundary by Don Sheldon of Talkeetna in his ski-wheel Piper Supercub on June 13. We spent fifteen days relaying food and equipment to our highest camp at 17,150 feet but this included waiting out storms and returning Heathershaw to 10,200 feet from Windy Corner (13,300 feet). A severe cold, a lack of appetite and the altitude made him too weak to continue. Because of two previous bouts with pneumonia, he felt it unwise to try to wait it out. After Sheldon was contacted by portable radio, he flew in and removed Heathershaw from the mountain. The final ascent was made on June 29 in threatening weather. The climbing time from 17,150 feet to the summit was eleven hours, including lunch stops and time to build a rock cairn at Denali Pass in which to house a recording thermometer. The temperature at eight P.M. at the summit was −14° F. and the weather a driving snowstorm. We descended to the high camp in three hours. Another storm forced us to halt the descent at the 14,200-foot camp. Sheldon flew three of us out from the 10,200-foot camp.

GLENN KELSEY, *Mountaineers*

Kahiltna Peak, Mount Crosson and other first ascents. Only one party had previously walked the entire length of the Kahiltna Glacier; that was six years ago when time restrictions prevented their doing any climbing on the way. (Beckey, Harrer and Meyerbohm. See *A.A.J.*, 1955, 9:2, p. 48.) We had decided to concentrate first on Mount McKinley and then to try the unclimbed peaks on either side as we descended the glacier. The glacier would be used for traveling and camping whenever possible. After our airdrop at 6800 feet on the Kahiltna, we should have to carry everything for the rest of the trip. After our successful climb of McKinley *(see above)*, Jerry Koch, Jim Richardson, Don Anderson and I left our 10,200-foot Base Camp near Kahiltna Pass on July 10 and traveled up the east fork of the Kahiltna Glacier to the base of the south ridge of the higher Kahiltna Peak (13,440 feet. See Plate 8 of *A.A.J.*, 1960, 12:1.) We gained this ridge via a steep snowfield on the east side and found it a series of schrunds and cornices. It was an interesting thirteen-hour climb to the summit. Our next quest was Mount Crosson (12,800 feet). We moved our camp to 6800 feet at the base of the mountain. The route fol-

lowed an easy southeast ridge. We next climbed a beautiful 10,450-foot peak across the Kahiltna Glacier from Mount Crosson, which we called "Bergchen" ("little Mountain" in German). Its east ridge provided an interesting ice climb with many problems. We moved camp downglacier by ski-toboggan, which worked well at night when the snow was frozen. Our next summit, a 9000-foot peak southeast of Mount Foraker, was easily attained from the north. Since the weather then turned bad, we were unable to complete any further climbs. We found the lower Kahiltna Glacier fairly easy traveling, having fewer crevasse problems now than those reported by the previous expedition. Much worse were the twelve days of rain and the chest-deep river crossings. We encountered only one day of bad brush going across the tundra to Talkeetna.

JOHN H. NEWMAN, JR.

Ascents East of Mount McKinley. Late in June Ken Laufer and I, both seasonal rangers in McKinley National Park, made the third ascent of Peak 8620. (First ascent by Adams Carter and party in 1957; see *A.A.J.*, 1958, 11:1, p. 91. Second ascent by Gene Wescott and party in 1958, who ascended the northwest ridge descended by the previous climbers.) We followed the Carter route for the most part though we reached the foot of the north ridge from the left (east) rather than the right. The snow made glacier travel hazardous. The ridge was hard ice covered with a foot of wet snow, which continuously avalanched from our steps.

In mid-July Tom Clark, three Germans and I made the first ascent of the 8400-foot peak 3/4 mile west-northwest of Scott Peak. We approached it up the main east tributary of the Sunset Glacier. Bad weather forced us to forgo our plans for Scott Peak and settle on Peak 8400 which was ascended in a blinding snow storm.

Charlie Travers and I made the first ascent of two mountains south of Polychrome Pass. We left the road near the pass and headed south up the ridge leading to Peak 7518. After ascending to this summit, we continued on to Peak 7952, traversing the ridge beyond until a large gendarme forced us to drop to the east branch of the main Toklat River. The ridge was knife-edged and very rotten, with an occasional snow crest.

On August 10 Jim Richardson and John Newman of the Bremerton McKinley party, John Thompson of Fairbanks, Travers and I again hiked up the Muldrow trough to its bend, where we camped. Next morning we crossed the black tributary glacier that enters the Muldrow just above the bend and climbed the north ridge, first up rotten rock and then hard snow, to the crest of the main ridge which divides the Muldrow from the

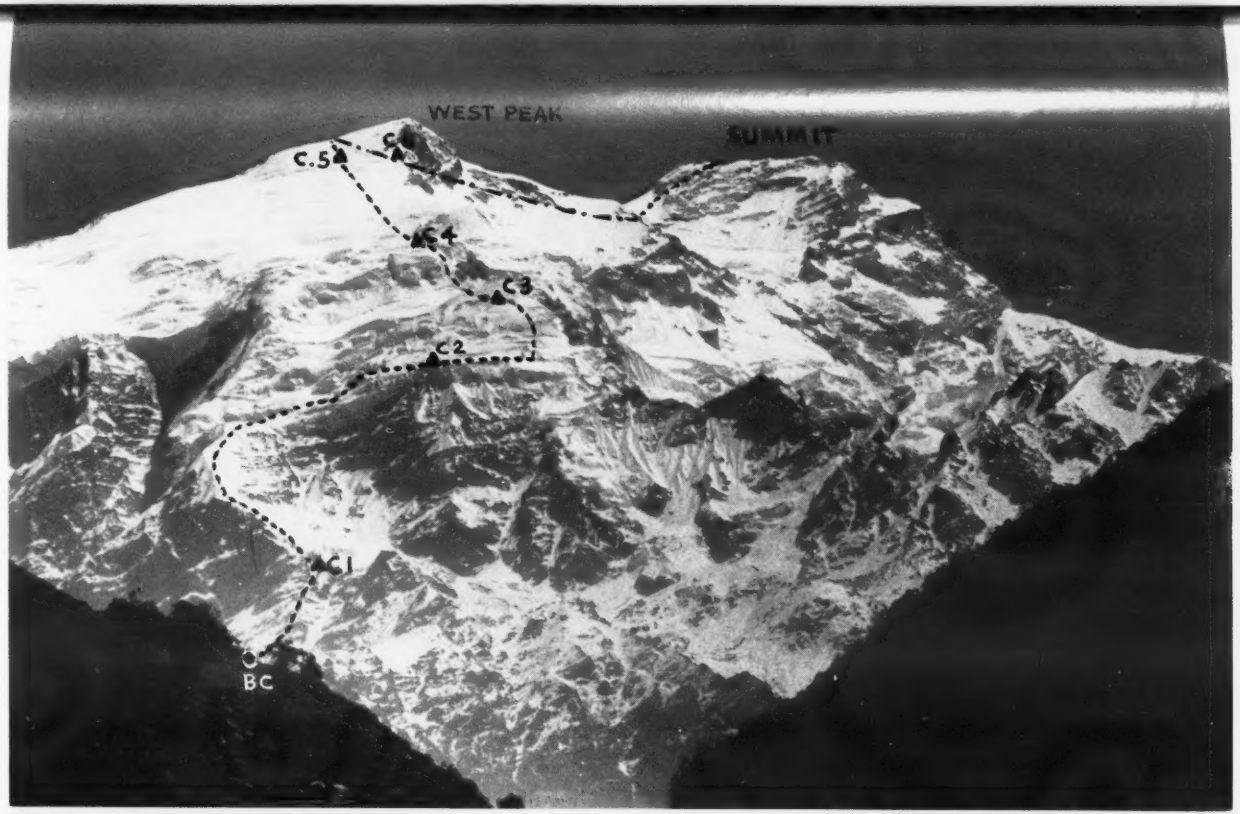

PLATE 55

Photo by K. Kimura

HIMALCHULI'S SOUTHWEST FACE.

PLATE 56 *Photo by K. Kimura*

ICE WALL ON HIMALCHULI between Camp III and IV. Route ascended ridge diagonally to left. Two ladders were used.

PLATE 57 *Photo by R. Maurice Davis*

NEVADO CAYESH from Condor Peak. Ascent was made up face on left to ridge facing camera.

PLATE 58 *Photo by R. Maurice Davis*

WEST FACE OF NEVADO CAYESH from névé above Camp I.

PLATE 59

Photo by R. Maurice Davis

SUMMIT RIDGE OF NEVADO CAYESH.

PLATE 60

Photo by H. Adams Carter

HUASCARÁN. Attempted ascent route on left sky line.

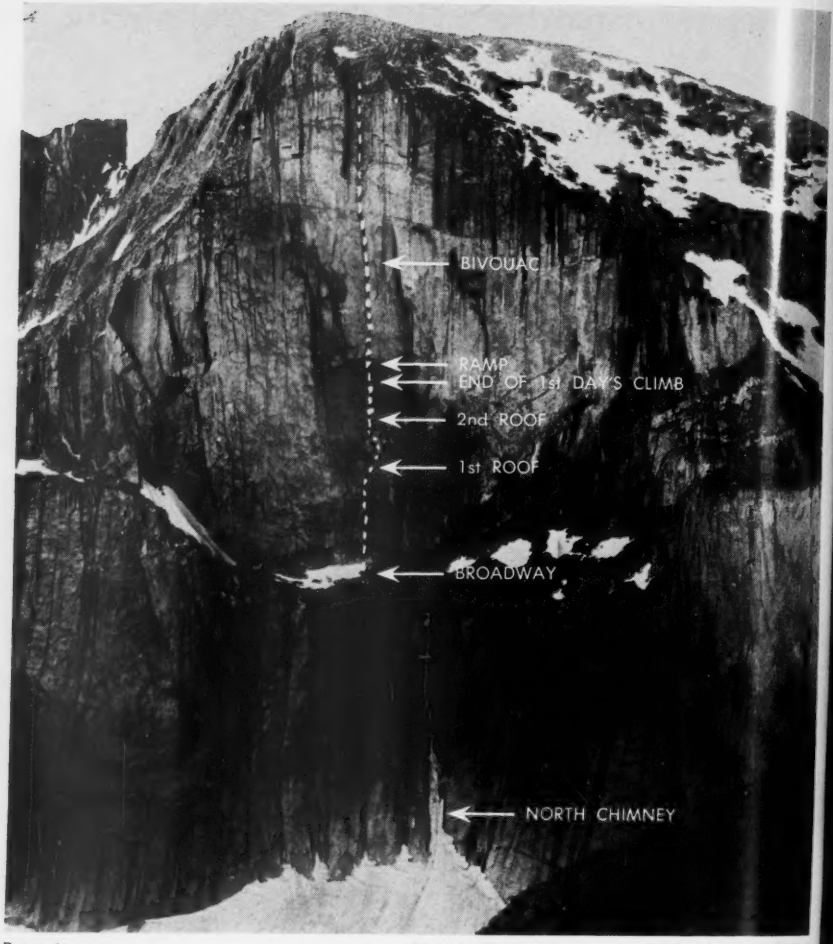

PLATE 61 *Photo by W. Gorrell. Courtesy of Colorado Mountain Club*

EAST FACE OF LONGS PEAK. The Diamond Route.

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KAMPS ON T IE DIAMO

Photo by Al Ma

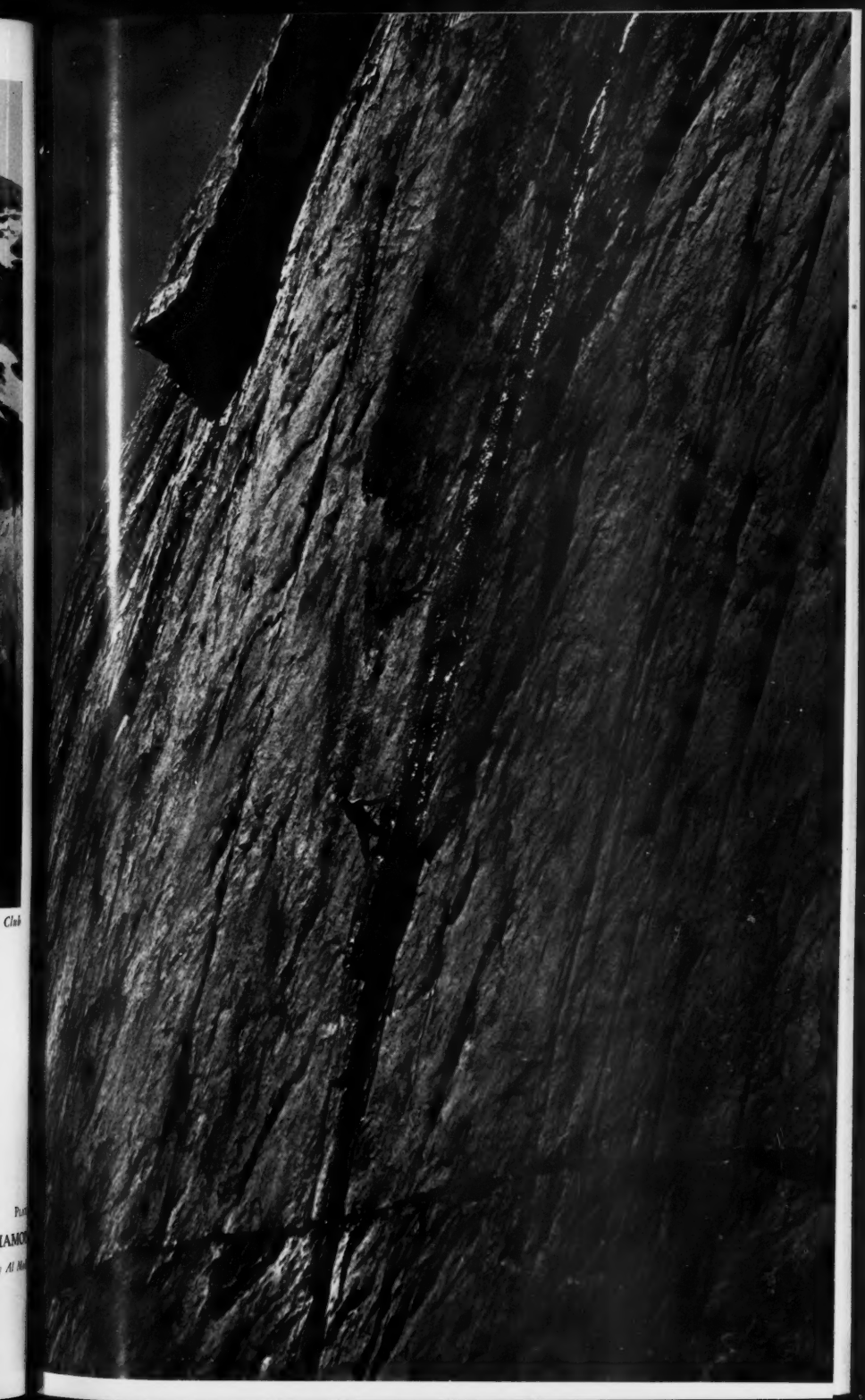


PLATE 63 *Photo by Thomas M*

NORTH FACE OF MOUNT BARING. A—First Step. B—Dolomite Camp. C—Second Step. D—Third Step. E—Traverse of Pioneers.

north fork of the Eldridge. From there we climbed the 9000-foot peak whose first ascent had been made by the Carter party a month before.

Two park rangers, James W. Larson and Richard J. Stenmark, made the first ascent of Sunset Peak (7865 feet) on July 11.

WALTER GROVE, *Wilbur's Alpine Club*

Climbs above Upper Black Rapids Glacier, Mount Hayes Area, Alaska Range. During the week of August 20 to 28, Buck Wilson, George Oetzel, John Dawson, Rick Litterick and I made two first ascents in the upper Black Rapids area but where unable to climb a 12,360-foot peak lying between Mount Hayes and Mount Shand. The goal of the expedition was to put a base camp in a high snowfield from which six unclimbed peaks over 10,000 feet might be attempted. Three days of walking brought us 30 miles up the Black Rapids Glacier to the large icefield, where the Susitna Glacier also starts. Our proposed routes to the high camp proved to be impossible cirques at the ends of two tributary glaciers on the north side of the icefield. The ridge between these two glaciers offered a possible route, which traversed a 10,065-foot peak. A third evening reconnaissance up the ridge showed that we could probably climb the peak, but very likely not with packs. On the fourth day we moved our camp up the ridge to just below a gendarme at 8600 feet. Since the snow was deep and wet, we arose at midnight to take advantage of the night's freezing. Buck Wilson and I were on the lead rope skirting down-slope of a heavily corniced narrow ridge when a 50-foot crescent of cornice broke away from where my ice axe was placed. Finding the rest of the ridge fairly difficult under the snow conditions, we reached the summit at about 5:30 as the sun was hitting the peaks. We realized that a descent in warm sunlight would be dangerous because of the snow and that trying for the next peak (11,288 feet) or the 12,360-foot peak would mean staying up more than 24 hours. From the peak we could see a route dropping down 1000 feet to the high snowfield and two miles across to the 11,288-foot peak. Because of the snow conditions we decided to retreat but only after seeing almost every mountain range in Alaska under perfect viewing conditions. We then moved our camp back down the ridge and across the Black Rapids glacier in order to climb an 8574-foot peak the following day, returning at about 11 P.M. The next day the party traveled 10 miles down the glacier, putting camp in position to try an unclimbed 11,500-foot peak on the north side of the glacier but closing weather and poor snow conditions weakened our enthusiasm for this peak. The last day we walked all the way out to the Black Rapids Roadhouse. Because we had a tremendous auroral display and a

meteor shower during our trip, the suggestion has been made that we call the two peaks we climbed "Aurora" and "Meteor" Peaks.

GENE WESCOTT

Institute Peak, Alaska Range, (Mount Hayes B-3 Quadrangle). One weekend, the last part of February, Chuck Deehr, Moonok Sunwoo, George Oetzel and I left Fairbanks with the temperatures at about −30°. When we arrived at the Rainbow Ridge emergency shelter the temperature was +20°. A day of packing brought us around the south end of Rainbow Ridge to a glacier below Institute Peak (8000 feet). On Sunday, although George was sick and unable to climb, the three of us climbed the peak by the direct south route for a second ascent. When we returned to camp, George was able to pack out and so we walked out that night arriving at the car at about 10 P.M. Such a climb as this in the Alaska winter demonstrates that climbing need not be confined to the summer months.

GENE WESCOTT

White Princess, Alaska Range, (Mount Hayes B-3 Quadrangle). The first week in April, twenty hardy souls braved below zero temperatures and high winds on the Castner Glacier, to spend four days of spring climbing. Most of the way the snow was wind packed into concrete-like surface, and snowshoes were abandoned in favor of crampons. On the third day a group of eight climbers, including Les and Teri Viereck, Ron DeWitt, Moonok Sunwoo, Pete Dzikiewicz, Lou Schene, Galen McWilliams and I climbed 9800-foot White Princess by its north ridge. This beautiful peak had been climbed once before from the south by Austin Post et al. Good weather and snow conditions made the otherwise difficult climb easier. The party had also planned to try Black Cap (9700 feet) which has not been climbed, but time did not allow an attempt.

GENE WESCOTT

Mount Spurr, Alaska Range. Looking straight west from Anchorage, the southern part of the Alaska Range appears to rise like a phantom out of Cook Inlet. Its southernmost peak, Mount Spurr (11,070 feet), is an active volcano which erupted in 1954, throwing black ashes over Anchorage, 50 miles away.

On September 3 Erik Barnes, Gregg Erickson, Bob Bailey, Chuck Metzger and I of the Mountaineering Club of Alaska, with Bert Puchtler of the Wesleyan Outdoor Club, landed by floatplane on the east end of Chakachamna Lake. After 2½ hours of packing uphill, we reached in total darkness a 3000-foot plateau. The next day was spent climbing the "wrong"

ridge and so, after a retreat to the "right" one, we established high camp at 7500 feet on the night of September 5. Skies cleared and it was only +8°. Shivering, we admired the peak, illuminated by a full moon. The view of the lights of our city glimmering far below across Cook Inlet was one of the highlights of the trip.

The alarm sounded at 2:30 A.M., but it took till five for us to thaw out, cook breakfast and tie frozen crampon straps. Just as we reached the ridge above camp, the sun rose and we felt warm and confident of success. Getting off that ridge was not easy. It dropped sharply for 500 feet and we could not see the bottom, but by sheer good fortune we found the only possible descent, an iced-up avalanche chute, where we could crampon down without knocking off loose snow. On the actual summit plateau we took turns breaking trail through heavy snow in brilliant sunshine with a light north wind blowing. Near the peak we circled around crevasses and several false peaks, admiring the beautiful, 100-foot walls of crystals caused by sulphur steam escaping from numerous vents. The largest of these incessantly sends forth lemon-yellow steam and a murderous smell. One last effort of step-chopping brought us to the summit at exactly twelve noon. Clouds had risen from the valley, but we were far above and admired an unrestricted view of our beloved Alaskan mountains. With only 24 hours left till the rendezvous with our pilot, we had not time to linger. At four P.M. we struck camp and after a quick cup of tea hurried back as fast as we dared. Darkness found us camped by a moraine lake with the northern lights playing over the peak of Spurr directly above us.

HELGA BADING, *Mountaineering Club of Alaska*

Alaska Rescue Group, Anchorage. The Alaska Rescue Group was founded as a result of the need for such an organization in the area. Hal Sherman and Johnnie Johnston called a public meeting early in 1960. Ted and Jan Koeberle, Stan and Janie Swanson, Art Jess, Jim Messick, Sherman and Johnston were elected temporary directors. The ARG works in cooperation with the Rescue Coordination Center at Elmendorf Air Force Base. The Group will activate when requested by any city, state or federal agency. Upon alert, the leaders contact RCC and the operation gets under way. The Air Force or the Civil Air Patrol furnish the greater part of the transportation and air cover. So far, the Group has been active in the McKinley operation, a Pacific Northwestern Airlines crash on Mount Gilbert, a lost child, a lost hunter and a lost prospector. Fortunately about 15 of the alerts proved false. The State of Alaska has cooperated by donating the use of a building and by making equipment available through the Civil

Defense. In August, the Group was incorporated and first term directors were elected with Paul B. Crews as Chairman.

(The editor has added the following paragraph from a letter to him from Johnston.) We were out on an interesting mission not long ago. A prospector had a bush pilot set him down near the snout of the Kahiltna Glacier. He wanted to look at a claim and then float down the river on a raft to a rendezvous point. He didn't show. The CAP searched by air for a week. When we were called in, four of us were set to leave from where he was landed and comb the Kahiltna, Yentna and Susistna Rivers until we found a body. We found him alive about where the Yentna hits the Susitna. His raft had broken up and he had wandered for ten days stark naked. He said that the plane had flown over him at least six times. All this leaves some doubt in my mind as to the effectiveness of air search; you can't beat the ground-pounders and people who know how to track.

JOHN H. JOHNSTON, *Alaska Rescue Group*

The Juneau Icefield Research Program—1960. The Juneau Icefield Research Program continued its annual investigations in the Northern Boundary Range of Alaska during the months of July and August, 1960. Under the aegis of the Foundation for Glacier Research the field studies were concentrated on obtaining further data on the Taku-Llewellyn Glacier system, thus extending the record which has been made consecutively over the past 15 years. Support was given to the program by the Geology Department of Michigan State University, by the United States Air Force, and by the Civil Air Patrol. The U. S. Forest Service and the U. S. Geological Survey aided through the loan of scientific instruments. Via the office of the President of Michigan State University, a cooperative program was also initiated in the field with a Japanese research group from the University of Hokkaido. This effort was preliminary to an international cooperative glacio-physical study anticipated for the program in the 1962 season. The 1960 J.I.R.P. expedition comprised a field team of 11 persons. A ski-wheeled Cessna 180 aircraft made 40 icefield landings in support of the summer's work. The program also employed helicopters for the first time, using them for special operations. Further logistical support was furnished by the Alaska Air National Guard which made a series of landings on the icefield with C-123J ski-aircraft. It is of interest that the C-123J is the largest aircraft to make ski-landings on an Alaskan glacier, and is capable of transporting seven tons of supplies and equipment in a single load. For glacier work the effectiveness of the unloading ramp on the tailgate of this aircraft-type was particularly demonstrated by these mis-

sions. Heavy generators and bulky research instruments, as well as lumber, metal sheeting, and other construction materials, were thus easily delivered to camp on the 4000-foot and 6000-foot névés, lying respectively 25 and 40 miles north and east of Juneau.

The scientific program extended the basic regime measurements and sub-surface thermal studies of previous years. It also repeated and enlarged upon some of the critical glacier movement surveys for long-range comparisons. Synoptic meteorological records were obtained at the camps on the intermediate and high-level névés. These data, obtained for correlative purposes of the icefield study, were also transmitted to the U. S. Weather Bureau station at Juneau for use in local and regional forecasts. The program's annual survey of frontal and névé-line fluctuations of the main outflowing glaciers was also conducted, most of this being accomplished by photogrammetric methods. This season's data show the 1960 summer to have been one of the most continuously wet on record. At the site of the program's new research station in the central icefield section (v. below), the record from minimum-registering thermometers for the interval 1958-60 revealed winter temperatures to −87° F. The extreme thermal hostility of this location with respect to any future winter operations is important, but the special interest of this unexpectedly low temperature is the relation to the geophysical character of the icefield's extensive crestal névé. Another striking observation was that the zone of maximum snowfall has taken a strong downward shift during the last years of this decade. Coincident with this a significant thickening of the ice on the Taku Glacier was noted in the vicinity of the mean névé-line.

For use in the continuing program, a permanent Snow and Glacier Research Observatory was completed on a nunatak at the 7000-foot contour (Camp 8). This new high-level station is directly on the divide between the Taku and the Llewellyn névés, at a point six miles southwest of Mount Ogilvie and lies within one mile of the international boundary between Alaska and northern British Columbia (Lat. 59° N.). Further supplies and equipment were flown to an adjunct station site at 4000 feet where a smaller station is under construction. Also in this season an additional aluminum-sheathed building was erected at 4000 feet where the program's permanent field headquarters is maintained. At each of these base stations new VHF radio equipment was installed to improve the reliability of future communications between icefield camps. In terms of the long range objectives of the study, the 1958-60 additions to the station facilities and the excellent research equipment now stored on the icefield will give exceptional advantages to the future program of periodic observations and comparative measurements.

MAYNARD M. MILLER

Washington—Cascades

Mount Baker, Cockscomb Ridge. This long, prominent ridge was ascended in its entirety for the first time on July 4 by Chuck Murley, John Musser and me. Although this ridge forms a prominent skyline on the north side of the peak, it appears that the last recorded attempt was made by a Mazama party in 1906, which finally climbed the Rainbow Glacier and the portion of the ridge above the 300-foot high Cockscomb Tower which had thwarted its original ridge attempt. We left the road the day before at 3700 feet and followed the trail to Kulshan Cabin and the moraine above to the edge of the Coleman Glacier. This and then the Roosevelt Glacier we crossed in a northeasterly direction to the foot of the objective ridge at 7800 feet. Here we stopped to cook dinner and rest. At 9000 feet thin bridges led across a maze of crevasses and a long contour to the east was made to bypass a schrund on the ridge. The climb continued in moonlight on abrupt slopes to gain the steeply rising ridge crest. A rocky, exposed bivouac was made at 9500 feet, where a splendid view of the lights of the cities of Bellingham and Vancouver added beauty to an otherwise cold night. After four hours of rest the climb resumed at sunrise and we turned the tower in the most direct line by steep snow on the east side. Above, the ridge broadened and merged rapidly into the summit snow plateau. We reached the summit at 10,778 feet in less than 14 hours of climbing, thus completing a route which should become popular thanks to a safe traverse under the spectacular west and north ice faces, and a long, interesting ridge climb of great beauty.

KLINDT VIELBIG

Mount Baker, Roman Nose. Looking up, we could understand why the Roman Nose, the last major unclimbed route on Mount Baker had not been attempted. The glacier on both sides of the 2000-foot snake-like arête were brown with fallen rock. We had come early in the season hoping that more snow would make it safer. (This ridge forms the southern edge of the Coleman Glacier headwall and is a prominent landmark just north of the Roman Wall, an ice cliff bordering the frequently traveled normal route.—*Editor.*) Early on June 27 Gordon Thompson, Mike Swayne, Don Ihlenfeldt and I gained the crest of the ridge some 200 feet up by a snow finger that led to it from the west. The first lead was a knife-edged ridge of crumbly mud-lava. Halfway across, this literally disintegrated under Gordon and he suddenly found himself 15 feet lower. We very nearly decided to turn back. Gordon led up a 20-foot vertical step (+IV) which was better rock. Things improved as we found that we could traverse on the 45° to 60° snow slopes just below and east of the ridge-crest. After

a thousand feet we came to the first vertical step, some 150 feet high. We hopefully followed the only possibility, chopping steps in the black ice along a tilted ledge, that went out of sight to the right. I led up rotten rock (IV) to a belay ledge. It was impossible to fix pitons because they only forced the rock apart. Gordon led off on a short traverse to the right, clearing the ledge of hundreds of pounds of loose rock before continuing up. Again it proved impossible to fix pitons on this pitch (−V). We were soon 300 feet higher at the base of the second vertical step. Again we followed a ledge to the right to bypass this 200-foot step, first passing under a cascade of water saturated with sun-loosened pebbles. Deep wet snow overlying black ice made the going slow and hazardous, but a few pitons on this traverse gave us the illusion of safety. In 200 feet we were able to climb back to the crest via a short awkward rock pitch inundated with melt water (IV). From here the rock ridge gradually merged into a snow ridge, which soon led to the summit ice cap.

EDWARD COOPER

Forbidden Peak, Northeast Face. Taking advantage of a spell of fine weather late in the season, Stuart Ferguson and I left at six A.M. on September 15, following the Boston Mine trail to attempt the northeast face direct from the Boston Glacier. We crossed the abrupt Sharkfin col, and rappelled into the bergschrund and up a 15-foot vertical ice wall to gain the main glacier. Traversing westward on the Boston Glacier, we chose as our line of ascent the rock just below and to the left of a large ice patch on the lower face. After 300 feet of grade III climbing (a few pitons) we reached the 300-foot, 50° ice patch, which we ascended. The remaining 600 feet of the face was quite steep, but due to the unusual nature of the rock (upslab) it was easier. The normal route was followed on the descent. (The normal route of ascent on Forbidden is often referred to as the "northeast face route," and is actually a traverse of the upper portion of the face just below the east ridge to avoid the gendarmes on the ridge. This high traverse is reached by crossing the east ridge at a high point.—*Editor.*) On the preceding day, we climbed a prominent pinnacle between Sharkfin Col and Sharkfin Tower, reaching the top from the east after one lead of −V. For this previously unclimbed tower we suggest the name of the "Shark's Tooth."

EDWARD COOPER

Mount Torment, North Ridge. Since the ridge traverse from Torment to Forbidden Peak in 1958 (*A.A.J.*, 1959, 11:2, pp. 301-2.), I had been anxious to return to this magnificent, alpine northern cirque wall. Starting

from the Boston Mine trail near Cascade Pass on July 8, Jim Kurtz and I circled the west side of Torment, crossed the west ridge low and descended 1000 feet to the savage, nameless glacier on the north side of Torment. A rappel placed us on the glacier, where we skirted crevasses and traversed under an ominous ice cliff to the east of the north ridge. Once on the ridge, we enjoyed 1500 feet of exhilarating grade III rock climbing over firm granite. (See *A.A.J.*, 1960, 12:1, Plate 51. Ridge rises to peak on the right.) At the summit, to our surprise, we found that this fine and accessible peak had not been climbed since our ridge traverse two years before. The descent was made down the southeast face where a rappel, a descent of a 55° snow finger, and another rappel over a schrund were required.

EDWARD COOPER

Mount Stuart, East Face. Even more jagged, glaciated and spectacular than the famous north face of Mount Stuart is the cirque of the Ice Cliff Glacier and its headwalls on the east and northeast face of the peak. The entire glacier has been climbed to the summit ridge well east of Stuart's top. Last summer a route was established from the upper basin of the glacier by the northeast face to the north ridge at a point just below the great gendarme. (*A.A.J.*, 1960, 12:1, pp. 116-7.) We felt that a more direct and entirely new route still existed on this headwall and after studying photographs, we saw a thread of ledges that wound upwards in a rightward spiral to mid-face just left of the great central slab of overhangs and unstably perched snow-patches. From here it appeared that we could either continue rightward and meet the existing route past the gendarme or climb directly up the east headwall to the summit crest a few hundred feet from the top. The latter was the way the route was completed. On the weekend of August 14, Ron Niccoli and I made a camp on the upper stream of Ingalls Creek Basin and spent a day making a reconnaissance of the Ice Cliff Glacier and the east headwall. We climbed three leads up the granite, using pitons for safety in about ten places, and then left our ropes in place as time ran out. We reached camp late, and cold, snowy weather kept us off the mountain until the next weekend. In order to traverse the mountain, we traveled light and abandoned ice equipment at the foot of the rock. The spiraling ledge system took us to mid-face adjacent to the great slabs, but not without difficulty. At this point we climbed directly upward on steep but well jointed rocks. Many of the pitches were strenuous jam-cracks, laybacks and pull-up problems. On the steepest ones we pulled up our rucksacks. We estimated that the climb had about 1500 feet of roped climbing, with virtually every pitch requiring piton

protection. Both of us led some sections with difficult moves and severe cracks, but no direct aid was needed. We reached the summit at 3:30 P.M., eleven hours from the valley.

FRED BECKEY

Mount Index, Middle Peak, West Face. This ascent was made by Don Gordon (Claunch) and me on June 12 with a planned bivouac on the descent about 600 feet below the summit. The lower portions of this gigantic face, about 2800 feet high, had been attempted by several parties, including one with Gordon. His discreet choice of the proper entry into a key gully kept us from becoming lost in a nearly vertical jungle of brush and trees. It is an area that will probably never be subjected to the logger or visited by the recreational climber. Any error of course in the lower 1000 feet will likely result in the climber's abandoning the route. We noted the tendency of certain ramparts to open favorably and the trend of ribs that continually veered to the right. Marking our route carefully with bright crepe paper, we climbed upward, roped even in the bushy-cliff areas, and eventually found ourselves high on the face. The most dangerous section was a steep rock wall, very rotten, that I led with the precaution of two pitons for protection. Further on, Gordon had to lead a vertical area where he clambered jungle-style up overhanging alders. In between and farther up, there were some sections of excellent and enjoyable rock climbing. On the final wall we climbed left of the deep chimney, which appeared to be full of loose rock, found one very interesting slab pitch and continued on for several leads to the ridge curving to the false summit and then on to the true top. This was the first direct ascent of the middle peak of Index and the only climb of it since Pete Schoening and I had traversed to its summit from the north peak eight years ago.

FRED BECKEY

Mount Index, South-North Traverse of the Three Peaks. The traverse of the three peaks of Index was a project that had for some time interested me. This traverse had been done only once before, when in 1951 it had been made from north to south. In early July, I was off from the car below Lake Serene at 10 A.M. The way to the summit of the South Peak, the highest of the three, is an easy but long scramble on the east and south sides through brush that is enough to test anybody's perseverance. After a long climb with the last 250 feet of exhilarating grade IV, I was surprised to find myself on the summit of a peak which did not even boast a cairn several miles south of the true South Peak, to which ran a jagged

ridge. I traversed on the west side until I reached easy slopes that led to the true top. The north face of the South Peak is a very complicated network of ridges and gullies, where difficulties would begin. Four rappels on a 300-foot rope, plus some descent on foot, brought me to a bivouac site. Early the next morning I made a final rappel into the notch between the South and Middle Peaks. The climb up the south face of the Middle Peak was not difficult but proved to be only the third ascent of that peak and the first via this route. It was here that I ran out of water, which was serious for this was the hottest day of the year and temperatures even at 5000 feet rose to over 80°. The descent of the north face of the Middle Peak was interesting, as after the last of my three rappels I found that I was 150 feet horizontally east of the notch between the North and Middle Peaks and separated from it by a very steep and exposed wall. Rather than to retreat and start over again, I made a grade —V traverse to the notch. The climb of the North Peak, previously unclimbed from the south notch, was the most difficult part of the entire traverse. The ridge crest was avoided by climbing below and on the east side for 200 feet; then the route continued for 300 feet on the west side. This was mostly grade IV or more difficult. An overhang where it was necessary to chin on branches was the crux pitch. Above this I ascended a subsidiary spur which drops down the west face to a notch where I had to master an extremely exposed and overhanging pitch (—VI). Another 150 feet brought me to the top of the North Peak, where I felt near exhaustion from lack of water. I stopped for an hour 300 feet below the summit on the descent to eat snow, and feeling somewhat refreshed, continued the descent via the very intricate regular route, which made me draw on all my route-finding experience to find the way down the unfamiliar 2500-foot face. The brush and scrub fir are so thick in places that it is impossible to see where you are going, or even where you are. Twice I had to reascend 300 feet to regain the route; setting rappels was especially tiring. Just as I thought I was going to spend another night on the mountain, I discovered the way down the last 400 feet and stepped off the North Peak 31 hours after leaving the car.

EDWARD COOPER

Mount Shuksan via Nooksack Ridge. Although Mount Shuksan has been climbed by so many different routes, the bastion from Nooksack Tower to the summit plateau, between the Nooksack and Price Glaciers on the northeast face, was unexplored territory. The extension of the Nooksack logging road makes the region much more accessible. Ron Niccoli and I climbed to the alpine ridge at timberline above the river bottom and bivouacked by

a fire. We left the smoke at four A.M. and were soon cramponing up snow and ice slopes beneath Nooksack Tower. After about 2000 feet of steep névé and ice with some step-cutting, an exciting alpine climb, we found ourselves in the chilly notch west of the tower. We climbed the crest of the very narrow Nooksack ridge for hours, occasionally avoiding fragile flakes by traverses but usually working along the top. The exposure was magnificent, with great walls sweeping majestically down to the glacial abysses on both flanks. Although one of the most alpine settings in the Cascades, the rock unfortunately ranks as some of the most unstable in the range. Though we never used a piton, some of the leads were quite dangerous, and we had difficult moments because of the rock. After reaching the final glacier, we climbed the east ridge to be on top at one o'clock.

FRED BECKEY

Ingalls Peak, East Ridge of the East Peak. This route, first climbed on October 11 by Don Anderson, Barry Prather, Gene Prater and me, ascends the prominent "dike chimney" in the south face of the ridge. This chimney offered grade IV climbing, with several short nearly overhanging pitches, while the remainder of the ridge provided scrambling on rather loose serpentine rock.

DEE MOLENAAR

Mixup, East Face. On September 11 Larry Baum and I made a new route on this face, beginning up the second large chimney north of Gunsight Pass. This chimney, which might also be called a gully, runs in a north-northwesterly direction from its base at the edge of the glacier and appears from a distance to lead to the summit. After we had rappelled into the bergschrund, an easy scramble on loose rocks straight up the chimney brought us to our first major obstacle, a barrier of chockstones. A short fifth and sixth class pitch on the right wall of the chimney took us above the obstacle and returned us to the chimney. From here we climbed another fifth class rope length out of the chimney and onto the ridge to our right in order to pass more chockstones. Once past this second barrier, we continued up the chimney, now definitely a gully, until we were sure that it was leading us north of the summit. We left the gully and angled up to the left over easy rock towards the summit. We met the regular route about 50 feet below the top and climbed to the narrow notch just to its north and then to the summit.

DAN DAVIS, *Seattle Mountaineers*

Mount Rainier, Success Finger. This new route was climbed on July 17 by Dick Wahlstrom and George Senner, who started from the Tahoma Creek campground at 3000 feet and followed the trail to Indian Henry's Hunting Ground and Pyramid Park. The Pyramid Glacier was followed to its head at 9000 feet where a small rock ridge was crossed to the Success Glacier. A northeast upward traverse was made to its head where a schrund was crossed at 10,600 feet, and a broad tapering snow finger followed to a short steep ridge where a camp spot was levelled out at 11,500 feet. This finger is the most easterly of three main fingers rising above the Success Glacier. Above 12,500 feet the route zig-zagged around rotten rock outcrops on short, steep snow fingers, and then contoured eastward with views down the wall above the Kautz Glacier. At 13,800 feet the Success Cleaver was gained and followed to Point Success, then across to the summit. The descent was made by the same route. This route, as well as the Success and Kautz Cleaver routes, are better ascended in the middle of the Rainier climbing season. Earlier in the year there is avalanche potential on the upper slopes, while later in the summer one encounters long, tiring pumice stretches lower down. Because of rock conditions and confinement to chutes it would not be recommended that large parties use this route. More time is required to Base Camp than on most other summit routes of Rainier.

GEORGE SENNER

Mount Adams, White Salmon Glacier. This new route was completed on the west side of the peak on July 3 by George Fraser, James Kurtz, Lex Maxwell, Robert Swenson, Dr. Ralph Uber and Louis Ulrich. The ascent started after an approximate two-mile traverse at timberline, bearing northwesterly from the end of the south side road at Cold Spring. After passing beneath the terminal moraines of the Avalanche Glacier, a cleaver led to the upper White Salmon Glacier, which spills from the summit area. There were no difficulties other than those offered by route-finding on the lower slopes and a few crevasses above. The domed effect of the upper glacier indicated a crevasse potential which would worsen as the season advanced.

LEX MAXWELL

Mount Adams, Lava Glacier Headwall. On July 3 Mike Swayne and I left our camp at 6500 feet at three A.M. and an hour later reached the glacier 2000 feet higher. After crossing the two bergschrunds, we headed directly up the center of the headwall at an angle of 45° on a smooth and

continuous névé slope. A few small pebbles whistled by, loosened by the action of the rising sun, but this did not prepare us for what was to come. At about 10,500 feet we heard a loud crack, like the sound of a gun, and looked up to see at least 1000 pounds of rock bearing down directly at us. We were unable to move on this steep slope, and one 500-pound rock passed within 15 feet of me over the rope between the two of us. We dodged other rocks the size of grapefruits and pineapples. Since it would have taken more time to go back down this death trap, we dispensed with belaying and in less than 30 minutes had more than 1000 feet behind us at a point where the headwall eased to 35°. A long walk across the summit icecap brought us to the top (12,307 feet) 5½ hours after starting, the first of seven parties on the mountain that day. On the descent we met the White Salmon party.

EDWARD COOPER

Mount Adams, West Face of North Ridge. This previously unscaled 4000-foot wall was ascended on September 11 by Forrest Johnson, Robert Ostro and Robert Startzell and me. After ascending steep ice slopes and crumbling lava ridges above the lower Adams Glacier, we reached the summit snow dome immediately to the east of the upper Adams Glacier icefall after 5½ hours on the face. Owing to the lateness of the season, much black ice was encountered and we had to be continually alert for the ever present danger of rockfall. Descent was made by way of the north ridge.

DEE MOLENAAR

Morning Star Peak. This fine, rocky peak is one of the prominent summits of the Cascade skyline seen from Seattle. It was climbed in July for the first time by Monte Haun, Mark Haun, Dick Hill, and Kenn Carpenter. The approach was made by the Sultan Basin road and the Vesper Creek trail. The trail was left after an hour and a stream bed followed for a short distance, then the broken northwest face was ascended by a talus field and gully system to the crest of the ridge leading to Sperry Peak. From this point the summit cliffs were skirted to the north ridge where a pleasant rock route led to the summit. No cairn or evidence of prior ascents was found.

KENN CARPENTER

Peak 4897, Sultan Basin. In May this sharply crested peak three miles north-northeast of Mount Stickney was climbed by Glen Watson, Preston

Bonney, Monte Haun, Bob Hall and Kenn Carpenter. The South Fork of the Sultan River was reached by descending 500 feet through brush from a mining road. The river was crossed, and open timber was ascended to the southwest shoulder from where a sharp rocky ridge led to the summit. No record of prior ascent was found, and the peak was named "Static Peak" for the eerie display of St. Elmo's fire.

KENN CARPENTER

Cardinal Peak, Chelan Range. This 8595-foot summit in the northern Chelan Range, which parallels the western shore of Lake Chelan, was finally climbed by Burr Singleton, Don Avery and W. A. Gilbaugh in late June. Five earlier attempts over a period of three years had failed because of problems from route finding, equipment, time and a blizzard that coated the steep summit rocks with ice that turned the party back just 30 feet from the top. Several pitons were used for protection on the main tower on a traverse and a vertical chimney which led to the exposed foot-wide summit ridge.

Practice Areas. Castle Rock, a popular, Gibraltar-like, 500-foot tower attached to the side of Tumwater Canyon and above the Stevens Pass Highway was the scene of several new routes, appropriately named Outer Space, Devil's Fright, and Diretissima, which required the use of numerous pitons. Several aid-routes done free for the first time are the Canary, Century, and Idiot's Delight. Ed Cooper and Eric Bjornstad pioneered these in late August and September, while Gordon Thompson and T. M. Herbert in May, September and October joined in the new routes, one involving a forty-foot overhanging layback which was done free. Cooper has prepared a detailed guide book for rock climbing in the Tumwater Canyon. On May 14 Snow Creek Wall saw another new route on the extreme left portion of the wall, as did the Black Pyramid in the Cashmere Crags near Leavenworth, which was ascended on June 22 by its east ridge.

EDWARD COOPER

Snow Creek Wall. A direct route up the 900-foot Snow Creek Wall near Leavenworth was completed by Fred Beckey and Ron Niccoli in two days of climbing. The upper section was featured by a 300-foot solitary crack on a flawless wall that required the use of wooden wedges. About 60 pitons were used on this very steep and delicate climb, now known as the "Outer Space" route.

FRED BECKEY

Guye Peak, West Face. The "Improbable Traverse" route was made on October 20 by Mike Borghoff and Dave Hiser, involving an ascent of a large corner on the left side of the face, then a traverse to the right on a blank-looking wall, followed by a left diagonal on the "ramp" to the upper portion of the face. This route is probably safer than the usual west face route.

EDWARD COOPER

California—Yosemite

West Face of Kat Pinnacle. On April 2 Tom Frost and I forced a new route on Kat Pinnacle. This starts on the 110° north face and then follows hairline cracks on the west face to the summit. The entire climb was artificial and included a very difficult "zipper" pitch where we placed a line of knife-blade pitons and "rurp" pitons, made specially for the climb.

YVON CHOUINARD, *Yosemite Climbing Club*

West Face of Sentinel Rock. After one failure in May, Tom Frost and I returned in June to make the first ascent of the 2000-foot west face. We started the climb at the very base of the wall and during the first day the climbing was about half free and half artificial. We bivouacked at the first of the only two ledges on the entire face. The next day we practically never got out of our slings. The climbing ranged from difficult to some of the most extreme climbing that we have ever done. Two pitches stand out especially: one was a traverse which involved putting in pitons straight up under a 35-foot long, very thin flake; the second man had to repiton the pitch as most of the pitons had fallen out because the crack between the flake and the rock had expanded. On the other pitch, Frost made the finest lead I have ever seen up an 80-foot long 8-inch wide jam crack with only a wooden block for protection. We again bivouacked on a fine ledge about 300 feet below the summit. The top was reached before noon the next day. Out of about 16 pitches on the route, we had to belay in slings on about 10 of them.

YVON CHOUINARD, *Yosemite Climbing Club*

North Face of Higher Cathedral Rock. No one had ever really looked at this face with the thought of climbing it without using many bolts, but Robert Kamps and Charles Pratt returned from reconnoitering with some hopeful news. They had spotted a vague route straight up the middle of the wall. On June 30 I joined them and we started up the overhanging 1000-foot wall. The first day we did three pitches. The direct-aid climbing

was very strenuous and needed a great deal of time because of poor cracks. The second day, the same type of climbing brought us to a huge roof 250 feet from the summit. To go over the ceiling would have taken 15 to 20 large wooden wedges and so we traversed left on very small holds to easier climbing. We reached the summit at 8:30 P.M. on the second day. No bolts were used.

YVON CHOUINARD, *Yosemite Climbing Club*

Coonyard Pinnacle. Slightly left and 400 feet above the top of Monday Morning Slab on Glacier Point Apron rises a 40-foot slab, Coonyard Pinnacle. On September 7, Joe McKeown, Rich Calderwood and I ascended this pinnacle from the top of Monday Morning Slab. The first pitch leads to a bush some 50 feet up on difficult friction. It is protected by bolts 15 and 40 feet up. The route continues up and right to a large ledge system, which is followed left until it gives out. A bolt is used for an 80-foot pendulum traverse which ends on a ledge directly below the pinnacle. A difficult friction pitch and then a flake system lead to the top of the pinnacle.

WILLIAM G. AMBORN, *Sierra Club*

Glacier Point Apron, Coonyard Pinnacle Route. From the top of Monday Morning Slab, the Glacier Point Apron rises up at only a 65° angle, but it is very smooth and crackless. After several attempts Layton Kor, Richard Calderwood, Bill Amborn, Jeff Foote and I managed to push the route to the "oasis," a spring of good water coming out of the cliff at the top of the apron. The climbing is essentially free except for a huge pendulum. This climb rates with the hardest free climbs in the country in length, extreme difficulty and lack of protection.

YVON CHOUINARD, *Yosemite Climbing Club*

Northeast face of Middle Cathedral Rock. On October 1 Charles Pratt and I put a new route up Middle Cathedral Rock which goes up the crack systems to the left of the Powell-Reed route. The climb took 1½ days and 110 pitons. Because of the lack of ledges on the route, Pratt was forced to bivouac standing in slings while I strung my pack horizontally between two pitons and sat on it all night. The latter system was more practical since it allows one to sleep.

YVON CHOUINARD, *Yosemite Climbing Club*

North Face of Lower Cathedral Rock. This very difficult climb was completed for the first time in 2½ days by Royal Robbins, Charles Pratt and Joe Fitschen.

Royal Arches. Royal Robbins and Joe Fitschen took three days to establish a direct route over the Royal Arches. This was all sixth-class climbing.

Other Yosemite Ascents. One of the more remarkable climbs of the year was the second ascend of the sheer 2900-foot high face of El Capitan. (For an account of the first ascent, see *A.A.J.*, 1959, 11:2, pp. 184-189.) This was made in the comparatively short time of 7½ days during the first half of September by Charles Pratt, Royal Robbins, Joe Fitschen and Tom Frost. From June 12 to 15 Pratt, Fitschen and Frost made the second ascent of the north face of Half Dome, and Robbins and Dave Rearick made its third ascent later in the summer. In April Frost and Yvon Chouinard made the second ascent of the northeast bowl of Sentinel Rock, a route that had not been done since 1948. Pratt and Chouinard made the third ascent of the northeast face of Middle Cathedral Rock in June, which involved strenuous laybacks interspersed with direct-aid climbing. The same pair made the second ascent of the Powell-Feuerer route on the north buttress of Lower Cathedral Rock in June. Frost and Chouinard made the third ascent in September of the north face of Middle Cathedral Rock. It took them 1¾ days and about 80 pitons to climb this 2200-foot wall, which had never been climbed before 1959.

Idaho

Sawtooth Range. The Iowa Mountaineers, 1960 Summer Camp was located on the southwest shore of Big Redfish Lake. The 76 climbers concentrated on the peaks flanking or near Redfish Creek. All of the major peaks and pinnacles in this immediate area were ascended including Grand Mogul, Elephant Perch, Eagle Perch, Redfish Peak, Cramer Peak, Warbonnet, Flatrock Needle, Grand Aiguille, and Heyburn. Black Aiguille was ascended for the first time. It lies on the Redfish Creek flank of the Groin and Quartzite Peak. It was approached by a steep, rock-filled couloir beginning about a half mile up Redfish Creek from the Heyburn Creek side. After a delicate climb up a flaky granite wall the climbers were confronted with a final steep ridge of classical "ball bearing granite." A small pinnacle near the top was lassoed to gain access to the summit. The party consisted of Hans Gmoser, Bill Echo, Paul Bloland, Wilbur Davis, Cornelia Davis, Rodney Harris, James Luce, James Ross, Stanton Taylor, John Walker, and Jack Wilson. Quartzite Peak was an unspectacular first ascent. The point is on the Redfish Creek end of a ridge that runs south from Mount Iowa. The summit lies directly west of the Groin. It was approached up the same couloir as that used to climb the Black Aiguille. It was fairly easy all the way. Flat Rock Needle was the most difficult first ascent of the outing. At

the end of a narrow ridge lying to the west of Quartzite Peak, the needle is easily seen from the trail near the Alpine Lake-Cramer Lakes fork, a spectacular rock projection with a sheer orange-colored wall. It was approached by a route that began near the trail fork to the right of the peak and up a narrow couloir. A delicate finger traverse was required to pass a large boulder blocking the couloir. The needle was then approached along the ridge. The final pitch was scaled using tension climbing on the ridge side of the needle. The party consisted of Hans Gmoser, Bill Echo, Dean Millsap, and Clair Brown. The north summit of Chockstone Peak was ascended for the first time. Chockstone Peak, on the south side of Redfish Creek valley, is easily identified by the huge boulder wedged in the cleft between its two summits. The route taken followed the fissure which extends down the east face from the cleft. The parties found interesting chimney climbing which included wriggling around small chockstones. About two-thirds of the way up the fissure the route divided. The parties climbing the south and higher peak angled to the left onto the face of this peak. The party which climbed the north peak continued up the chimney to the chockstone itself. An interesting looking layback beginning at the top of the chockstone seemed a feasible alternate route up the south summit. The descents were made down a series of scree slopes on the west side.

JOHN EBERT

Sawtooth Range. Jerry Fuller and I chose the unclimbed south face of the Lower Aiguille as a pre-season conditioning climb. We well deserved the unexpected difficulties encountered in three rather exhausting chimneys and the final traverse *à cheval* to the highest point of the knife-sharp summit ridge. This new route (class V) was the second ascent of the lower "Chamonix-type" tower first described by R. L. M. Underhill in *Appalachia* of 1937. The descent rappels followed the first ascent route on the north face. A few weeks later, Fuller and I successfully lassoed the tip of the "Split Tower" (called the "Groin" by the Iowa party). The brand new Iowa Mountaineer register of their first ascent, which we found there, was cause for genuine consternation. Remote Warbonnet Peak was visited four times during the past climbing season. After a lightning storm abruptly interrupted our progress on the east face of this splendid mountain, Fuller and I completed this fourth new route on our second try. The variety of pitches in this ascent (easy class V) entertained us with the best this versatile peak can offer. The Iowa Mountaineers climbed Warbonnet a few days later by the now traditional south face route, and Fuller and I

again criss-crossed the same face one sunny October day; we departed from Sun Valley at three A.M. and returned there for a late dinner. The unclimbed north face will, without a doubt, some day become the most exacting climb in the Sawtooths.

LOUIS STUR

Wyoming—Tetons

Mount Moran, The Blackfin. The ridge immediately east of the now classic south ridge of Mount Moran begins with a tower of dark rock, which has been named the Blackfin. This tower appears about 1000 feet above the first grassy ledge of the south ridge route and is the first of five on the distinct ridge which curves upward and west to join the main south ridge about 1000 feet below the summit. That this ridge offered a climbing route was first realized by David Dornan who, with Pete Lev, made a reconnaissance climb to see if the approach were feasible; the principal route-finding problem was to reach the base of the Blackfin. After negotiating a difficult pitch just west of the main waterfall on the south face in order to reach the second grassy ledge, Dornan and Lev discovered a crack and chimney system through which, with moderate difficulty, they were able to reach a large platform at the lower edge of the main south face bowl. Two difficult leads on smooth rock took them to a point from which they could see a route to the base of the Blackfin. Their mission accomplished and time running out, they rappelled down the route, leaving in a couple of fixed ropes. On July 4 and 5, Dornan and Leigh Ortenburger returned to complete the route. The part of the route which had been previously climbed went quickly, and, as was to be true of the entire route, the rock was excellent, significant portions being equivalent to the best in the range. From the old high point one difficult and two moderate leads placed them in the area just below and slightly west of the Blackfin. They scrambled up to a large diagonal quartz vein. Two leads along this brought them to the top of the Blackfin, the first tower. The second tower was climbed direct and involved one difficult lead of about 150 feet in the middle section. After scrambling to the top of this tower, the buttress leading to the third tower was attacked. To surmount this obstacle required a very difficult, short lead up a steep crack system on the very nose of the ridge. By the time the top of this pitch was reached, the weather was shifting and some snow and sleet were beginning to fall. It was necessary to pass over this third tower as fast as possible in order to find protection from the elements. Hence the route was not as direct as that previously adhered to. The summit of this tower was attained from the west and descent made

down to the notch late in the afternoon. Since this was the planned bivouac site, the remainder of the daylight was spent in gathering wood and making a comfortable bivouac with both water and fire.

The next morning they found that the fourth tower started with a short overhang and slabs for about 80 feet leading to a fine chimney pitch of some difficulty. The climbing then became easier and this summit was soon reached. The last tower, number five, also proved comparatively easy. After joining the south ridge, the usual scrambling along the east edge of the ridge led to the final piton pitch, which emerged onto the flat summit from the west. Dornan and Ortenburger reached the summit about three P.M. and then descended by the CMC route, which was exceptionally wet.

The Blackfin proved to be a very fine climb, having many features to recommend it. The rock is consistently excellent and its over-all difficulty is about the same as the south ridge, but without any extended direct-aid pitch. There is great variety in the climbing and the southerly aspect of the ridge allows one to climb in the sun all day.

Traverse of the peaks at the head of Open Canyon. On July 12, Dave Dornan, Mark Melton, Mona Monahan, and Leigh Ortenburger climbed all five peaks at the head of Open Canyon and found two that apparently had not been previously ascended (at least by humans). After ascending Prospector's Peak by the southwest ridge, the party climbed Peak 10,979 by the easy ridge connecting with Prospector's. Since no evidence of previous ascent was found on the summit, a cairn was built and the name *Tukuarika Peak* was given. Continuing westward, the cliff-ringed Peak 10,874 was climbed from the west up what was apparently the only easy route. At the extreme south edge of the large flat summit a cairn containing a nail, but no record, was found. Since this was presumably built by a surveying party under T. F. Murphy in the mid '30's, the name *Murphy Peak* was given. Its twin, Peak 10,882, equally well guarded by sedimentary cliffs and flat-topped, was next climbed by a crumbly route up steep and rotten dolomite on the northwest side. The route of descent, the southeast ridge leading toward Mount Hunt, is the one easy route and had apparently been used a few hours earlier by the two elk which we had seen on the summit, while we were on the summit of Tukuarika Peak. In honor of these adventurous elk, we named the peak *Two Elk Peak,* since, other than their hoof marks, there was no evidence of previous ascent. The traverse was completed by ascending Mount Hunt via its west ridge and descending its east ridge to the Open Canyon-Granite Canyon trail.

Blockhouse, West Face. This short but impressive face was first climbed on July 8 by Al Read and Sterling Neale. After traversing right on easy

rock nearly to the edge of the south face, they climbed up and slightly left for 80 feet to a ledge from which a 15-foot traverse left, on very small holds, led to a belay ledge. The second lead went directly up the corner formed by the west and south faces. A scramble then led to the summit.

Peak 11,350+ (Matternaught Peak). This small peak, which is prominent from Lake Taminah in Avalanche Canyon but which is only a shoulder southeast of the South Teton, was first climbed on July 25 by George Hurley and Jean Tuomi by the east ridge. Descent was made via the north ridge to the notch and then west down a couloir to the meadows in Avalanche Canyon.

Traverse from Lower Saddle to Valhalla Canyon. Although not a route to the summit of any peak, this traverse is nevertheless of sufficient importance to be brought to the attention of those who have an interest in climbing any of the routes which either begin or end in Valhalla Canyon. In the past the customary method of climbing from Valhalla Canyon involved establishing a camp in the canyon, making the climb, and then returning at a later date to retrieve the camp, since the only entrance to the canyon was from Cascade Canyon. The need for a route from the Lower Saddle to Valhalla had long been clear to me, especially after 1953 when Mike Brewer and I climbed the west face of the Grand Teton. This route was worked out on July 25 by Leigh and Irene Ortenburger, after a careful study of photographs. From the Lower Saddle a large cairn built at that time should be visible on a flat step of the southwest ridge to the Enclosure. A diagonal route up through and across some gullies leads easily to this point, which is actually on the edge of the west face of the Enclosure. A slight descent is required for the easiest passage of the broad bench on the west face. Another cairn will be seen at the edge of the west and north faces, at the beginning of the crucial ledge which diagonals down and across the sheer north face of the Enclosure. The latter part of this ledge is unpleasant and rotten, requiring a rope for safety; the ledge ends at the lower ice and snow slope below the Upper Saddle. After cutting or cramponing across this, an easy downward traverse to the north puts one into the main couloir descending from the Gunsight Notch. The lower reaches of the Canyon are then easily obtained by descending this couloir. The significance of this traverse lies not only in making convenient the retrieval of camps in Valhalla, but also in making all of the Valhalla routes available from a camp on the Lower Saddle, since the total time for making the traverse is two to three hours.

Grand Teton, Northwest Chimney. This large chimney is perhaps the most prominent feature of the Grand Teton when viewed from the north-

west, as for example from the lower part of Valhalla Canyon. Leigh Ortenburger first considered this chimney as a possible route in 1953, while approaching the west face route with Mike Brewer. He returned in 1957 with his wife, Irene, and Fred Ayres to attempt this chimney, but it was too early in the season and difficult iced rock made the climbing too slow for success, so they retreated before even reaching the base of the chimney. On July 26 the Ortenburgers with Dave Dornan again set out to investigate this chimney at three A.M. Using information gained from a reconnaissance the day before while traversing from the Lower Saddle, they quickly reached and ascended the second large diagonal shelf leading to the base of the chimney. The top of this shelf was separated from the chimney proper by a vertical section of massive, solid rock which was cut by only two cracks. The right crack had no feasible entrance, so it was necessary to choose the left one even though there was ice-cold water trickling down one side. Ortenburger made a 120-foot lead up this very difficult crack to a semi-satisfactory belay spot; another rope-length led to a perch alongside a 40-foot wide sheet of pure ice in the bottom of the chimney proper. After cutting across this ice, Ortenburger established a solid belay point to protect Dornan who faced the crux of the climb, the very steep, slightly loose back wall of the chimney leading up toward a huge chockstone. Skillfully using a few direct aid pitons, Dornan was able to pass the worst section and then free climb up to a very small, exposed ledge where we joined him. This was doubtless the hardest pitch of the climb. Dave then led up another pitch, also using direct aid, until he was above the chockstones. From here Ortenburger cut steps up 80 feet of pure ice (it is doubtful that the sun ever penetrates to the bottom of this chimney) to reach the last steep part of the chimney. Stemming up this portion, Ortenburger found a large, loose block which it would be difficult to pass without endangering the lives of those below. Much time was spent in finding a very small ledge from which to belay, and then belaying both Irene and Dave up into a small cave where they would presumably be out of danger of the falling block. The block was then pushed off and shot down the steep ice, bounding from side to side before disappearing from sight into Valhalla Canyon. Dornan was then able to come out of the cave and belay while Ortenburger finished the last few feet of the pitch into a small bowl of black rock which represented the end of the chimney. It was now late afternoon and it was imperative that the route be finished in haste. From the bowl, a traverse to the left led to a series of cracks near the north edge of the west face, which took the party in about four leads to the wide scree bench leading from the end of the north face second ledge

over to the Crawl of the Owen route. On familiar territory at this late hour, they decided, rather than continue on to the summit, to traverse over to the Crawl and descend to the Lower Saddle.

This route is perhaps the most difficult on the Grand Teton, which is quite a statement considering the reputations of the north face, north ridge, and west face. Yet the accomplishments of this party were surpassed on August 4 when Royal Robbins, Joe Fitschen, and Yvon Chouinard repeated the climb to the bowl of black rock without using direct aid below the chockstone. Furthermore, they traversed right and up from the bowl onto the upper and difficult part of the west face route, thereby combining the two most difficult routes on the peak into an outstanding climb.

Middle Teton, North Face. To the east of the northwest chimney route, first climbed in 1955 by Goodrich and Reppy, is another similar chimney less attractive than the first and separated from it by a smooth face. From the Lower Saddle on July 30, Royal Robbins and Joe Fitschen ascended the glacier to the bottom of this chimney and then followed cracks and blocks for about 500 feet of moderate climbing to the ledge at the beginning of the final 300-foot face. A vertical crack 25 feet to the right of the chimney (which on close examination was even more unattractive) provided easy direct-aid work for one rope-length. The final pitch diagonals steeply upward to the right, passing the final overhangs on the right and involving extremely difficult free climbing, but no direct aid. From there a scramble led to the summit, which was reached at five P.M. after a start at 12 noon.

Grand Teton, North Ridge. On July 31, Jake Breitenbach, Leon Sinclair, Irene Ortenburger, and Leigh Ortenburger made the first direct approach of the north shoulder of the Grand Teton from Valhalla Canyon. Although the rock was a trifle loose in places, only one or two short spots required the use of rope for protection, and so it can easily be seen that the difficulties are much less than the usual approach from Amphitheater Lake. Even more significant is the short time, 2¼ hours, required to reach the top of the shoulder from camp. In addition the rockfall danger seems to be less. This discovery, combined with the new traverse from the Lower Saddle to Valhalla, would seem to make entirely feasible the ascent of the North Ridge from the Lower Saddle. The route consists essentially in following the first shelf of the northwest side of the Grand Teton out to its culmination, the north shoulder.

Fourteen-Hour Pinnacle. Jake Breitenbach and Sterling Neale made the first ascent on August 3 of this pinnacle which lies west of Ayres Crag #5 and opposite the entrance to Valhalla Canyon. They ascended the south

ridge. The first of three overhangs was passed on the right, the second on the left, and the third required one piton for direct aid in order to pass it on the left. Dick Bonker and Willy Gonthier on August 11 made the second ascent by a different route, the southeast face. About nine pitches were involved, three requiring the extensive use of direct aid. In both cases it required fourteen hours to make the ascent and return.

Big Bluff. Probably no one who has camped at the Platforms in Garnet Canyon has given any thought to climbing the overhanging cliff directly above, that is until Royal Robbins and Joe Fitschen climbed it on August 12. This may represent the climax of the rock climbing efforts which have been concentrated in the lower portions of Garnet Canyon in the past five years. They started from the gully to the west of the overhang and ascended easy ledges to the broad terrace below the 150-foot overhang. Next, a red flake was attacked and passed to a sloping ledge where the first bolt was placed. From there the next extremely difficult lead traversed horizontally 30 feet to the right and then upward to a quartz-like rock formation where the second bolt was placed (it fell out after being used). The final pitch of difficulty diagonals upward to the left and emerges from the overhang to the level ground above.

Thor Peak, Northwest Face. After studying aerial photographs all winter, Leigh Ortenburger was convinced that Thor Peak had a 1200-foot northwest face which should at least be investigated during the summer. An additional attraction to this route was the problem of approach; it appeared that no one had ever penetrated the side canyon of Moran Canyon that separates Mount Moran from Peak 10,950+. After much talking he was able to convince three others, Leon Sinclair, Raymond Jacquot, and his wife, Irene, that this unknown face harbored a worthy new route. A day of hard work was necessary in order to establish a bivouac in the above-mentioned side canyon at about 9400 feet near a stream west of Peak 11,117. Early on the morning of August 13 the bottom of the face was reached by first climbing to the saddle between Thor and Peak 11,117 and then descending into the cirque on the northwest side of Thor. Here, an apparent glacier was discovered; it possessed various characteristics of a glacier such as bergschrund, crevasses, moraines, but we were not able to examine the stream draining the snowfield in order to determine whether or not it was milky. The face above, which proved to be unnecessarily rotten, was attacked from the top of the moraine slightly to the left of the center of the face. The difficulty was not severe, and except for one pitch, all of the pitons were placed because of the instability of the rock. The route ended on the northeast ridge about 150 feet below the summit, which was easily reached

by scrambling. Descent was made via the southwest couloir to the saddle previously mentioned, and thence down the gully to Leigh Canyon. Repetition of this route can scarcely be recommended; the rock is not good!

The Jaw, North Ridge. Loring Woodman and Duncan Cameron made the first ascent of this route on August 21 from the saddle between the Jaw and the Outlier (Peak 10,628). After the first vertical step, 90 feet of scrambling brought them to a slight overhang leading to a prominent pinnacle which was passed on the right. The last pitch, a jam crack followed by a hand traverse, proved to be the most difficult of the climb.

LEIGH ORTENBURGER

Pinnacle Peak, Gros Ventre Range. On June 18, the first ascent of Pinnacle Peak was made by Jake Breitenbach, Stu Krebs, Stan Shepard, Pete Sinclair and me. For several years there had been rumors that this small peak appeared very difficult on all sides. From the old coal mine in Little Granite Creek, we climbed forested slopes on the north to high meadows leading to a col about two miles east of Pinnacle Peak. We followed the long ridge westward over a gentle summit (Point 10,628) to the base of the peak. A rotten chimney on the south and a short, exposed scramble of moderate difficulty on the southwest ridge brought us to the summit plateau. The actual summit is a little 15-foot tower of crumbling limestone.

WILLIAM J. BUCKINGHAM

Wyoming—Wind River Range

Flake Buttress and North Face, Squaretop. Squaretop Mountain bears a striking similarity to the Devils Tower. Upon our arrival at Lower Green River Lake, Ron Niccoli and I clearly observed the giant "flake buttress" that ended in the north face some 300 feet below the summit (11,679 feet). Dick Pownall and Dick Emerson had attempted this route in 1958. On September 5 at four A.M. Ron and I left the campground at the lake. After a nine-mile hike up a fine trail, we found a log across the Green River and climbed 1000 feet to the base of Squaretop. From here on we had the choice of climbing in a giant cleft or on the large flake buttress to the left to a ledge where they melt into the north face. Pownall and Emerson chose the former until they were 200 feet below the ledge where they traversed to the ridge. We chose the latter and enjoyed some fine Grade III and IV climbing on good granite for some 1000 feet. Difficulties increased considerably 250 feet below the ledge. A difficult pitch (−VI) on the right side of the ridge brought us to a piton with a rappel sling, located under an overhang. This marked the end of the earlier attempt.

Above this, the climbing was artificial for 20 feet. Several pitons mark the route. The remaining distance to the ledge was Grade IV. There, 300 feet below the summit, the first lead (+V) was quite obvious. Above this we had the choice of several lines and chose one to the right. Free climbing (+V) brought us to a pitch that was running with water. This was surmounted with aid and in 60 feet more the summit was reached. A long hike brought us to the highest point. We got back to camp at midnight after 20 hours on the go. We used about 20 to 25 pitons. For climbs on Squaretop—and there are plenty of them left—we advise a camp under the peak, as it is a very long distance for a one-day climb.

EDWARD COOPER

Northeast Face, Squaretop. Layton Kor and I started our climb up a steepening slab system on the northwest face, between two converging couloirs. This section had about six leads, two of which had some quite difficult free moves protected by pitons. No aid was used. The rock was excellent. From this converging point, which was actually a short arête leading into a central couloir between great vertical walls, we followed the couloir and its right side for about four leads, then struck directly upward on a steep wall that was well broken with cracks and flakes. A number of pitons were used in this wall for protection, and again there were various strenuous technical problems. Once on the summit rim, it was a few minutes' walk to the curious top. Both our party and Cooper's reached the summit shortly before evening and made the descent to the valley by the southern slopes. The long walk to camp was featured by moose and moonlight. Although the approaches are tedious for this region, we feel that Squaretop has great climbing possibilities. These two routes are the only continuously difficult and long high-angle problems accomplished in the northern Wind River Range, to my knowledge, and give proof to the surmise that classic alpine rock climbs of difficulty exist there.

FRED BECKEY

New Ascents in Central Wind River Range. In July, Bill Dougall, Mark Haun, Monte Haun, Bob Bell, Jon Hisey and I spent eight days in the Island Lake—Titcomb Lakes area and completed eleven ascents between electrical storms. Of major interest to future parties is the camp established about 1¼ miles north of the upper Titcomb Lake and directly below the west face of Mount Helen. A tremendous boulder sits there on a meadow bench with a 12 x 15-foot overhang on its north side, which we partially walled in and found more than suitable for sheltering six.

From Island Lake we climbed Knife Point Mountain (13,007 feet) and then continued another half mile east along the ridge to a 12,800-foot peak overlooking Alpine Lakes. No record of prior ascents was found on the latter, which we called Nebraska Point. A second day from Island Lake took us on a traverse around the south side of Cairn Peak to the Cairn Peak-Ellingwood saddle. From here a quarter-mile traverse east and a 700-foot scramble brought us to a large smooth saddle on Ellingwood's south ridge from where we climbed to the main peak (13,000 feet) apparently by a new route. Immediately south of the saddle is a 300-foot tower (12,500 feet) with two very interesting and exposed class 4 leads. We made its first ascent via a rib just left of the central chute and named it Faler Tower. It can be seen from the Island Lake campsite poking ominously above Cairn Peak's south ridge. Our return to camp was via an ascent of Cairn Peak's east ridge. Also climbed from Island Lake were Fremont (13,730 feet) and Jackson (13,400 feet).

One day was spent moving gear six miles to the Mount Helen Boulder camp. Gannett Peak (13,785 feet) was climbed via Bonney Pass and two new routes were made in ascending Mount Helen (13,600 feet). Two long and steep snow fingers angle up and left to crease Helen's northwest face and the party was split to get them both. The longer west gulley gave us a beautiful standing glissade on the descent with a 2000-foot drop. Also climbed were Miriam Peak (13,110 feet) and a second ascent of the south face couloir on Woodrow Wilson (13,500 feet).

KENN CARPENTER

Ross Lake Cirques Area. Brian Underhill and I spent two weeks in early August in this area, which offers the northernmost climbing in the Wind River Range, being several miles north of even Downs Peak. As inaccessible as any part of the range, the backpack took us four days to get past Lower and Upper Ross Lake and included among other things the construction of a raft. A barren, decaying tableland, about 12,200 feet high, surmounts this network of cirques. A relatively easy route was found to the tableland, leading directly up the wall above our camp at Mile Long Lake (grade 3). Once on this shelf, one is prevented only by a mushy horizontal glacier from roaming all over the Downs Peak massif and the two flats, Ram Flat and Goat Flat. Downs Peak (13,344 feet) was climbed by way of Bonney's Peaks 31 and 12. (See O. H. and L. Bonney, *Guide to the Wyoming Mountains and Wilderness Areas,* Denver, 1960.) We climbed many lesser unclimbed peaks in this vicinity including an easy scramble up Bonney's Peak 26, a traverse along the ridge to Peak 30 and

thence to Ram Flat and back to camp via Peak 24. Perhaps the most interesting peak is a flat-topped, steep-walled remnant of the tableland between East and West Torrey Creeks (Peak 29); this had apparently only one weakness, the north ridge, a grade 3 climb. We also climbed the southwest ridge of "Torrey Peak" (no Bonney number), which lies east of the southern end of Upper Ross Lake. Almost every notable protrusion was climbed except for a selection of fine needles around the foot of Jeralee Lake. New snow at the end of the second week kept us from trying their ascent.

CHRISTOPHER GOETZE, *Harvard Mountaineering Club*

Shark's Nose, Southwest Face. The longest face on Shark's Nose, one of the most striking summits in the southern portion of the Wind River Range, is the west and southwest, which presents a very impresive wall from the cirque of Shadow Lake. While traversing the range at the end of July, Yvon Chouinard, Ken Weeks, and I had little difficulty in deciding that this would be our first climb in the area. After a reconnaissance and a successful evening of fishing, we bestirred ourselves early and climbed to the lower right skyline as seen from the lake. The crack systems worked directly upward, and we climbed unroped for several hundred feet. The climbing was steep, but the rock was excellent granite and had many holds and laybacks. Eventually we traversed left of the central corner and then went up some layback cracks that were strenuous. A long, difficult pitch led up a wall on the right. The climb continued steeply upward, then worked left to some small fissures where the climbing again became very thin, but always just possible without direct aid. In four more leads we reached the summit notch about 150 feet south of the top and traversed along the crest. The total climb had involved about 1500 feet.

FRED BECKEY

Shark's Nose, North Face. The north face of Shark's Nose, immediately above the notch adjacent to Overhanging Tower, offers a direct ascent of about 600 feet. Though it has been used for descent, the face had never been scaled prior to this summer. After descending from the summit the day of our southwest face climb, Chouinard, Weeks and I climbed a difficult lead directly above the notch, then left a hanging rope. The following day we continued a lead on mixed fifth and sixth class, then one of fifth class, only to be literally blasted and rained off the face. We retreated with quick rappels, leaving ropes in place. With better luck the next morning we prusiked back to the high point and finished the climb on a fine, difficult

lead by Chouinard, which involved some very thin face climbing and an awkward jam-crack. One bolt for aid and a wooden block was used among the usual selection of pitons. Chrome-alloy knife-blade pitons made a number of sections possible that could not have been done otherwise.

FRED BECKEY

North Face, Mount Mitchell West. Like a rocky version of the Piz Badile, the north face of Mount Mitchell's west peak dominates the spectacular surroundings as one looks across Lonesome Lake, in the heart of the Cirque of the Towers region. In late July, Yvon Chouinard, Ken Weeks and I made a direct climb of the face. At first we felt the ascent might require two days, but once at the base of the 1500-foot wall we decided to leave our bivouac equipment there. The start is about 100 feet left of an arch-cave on the base ledge where the route follows up a steep face for about 500 feet. Here the rock is so excellent and studded with holds that the entire climb was fifth class. Arriving at a large grassy ledge, the route traverses right and up a flake system. The key to the ascent from there is a prominent bowl about three-forths of the way up. A delicate slab system leads into a deep chimney, which is stemmed for two pitches to easier ground. We feel that the entire climb may some day become a classic route; it has a fearsome appearance, but while it has a number of difficult free climbing sections and individual moves, there are always good belay ledges to break up the continuity. The rock was very crystalline, excellent for holds, but piton cracks were occasionally scarce.

FRED BECKEY

CANADA

British Columbia

Bugaboo Spire, East Face. All winter I longed to return to the rock of the beautiful and inspiring east face of this peak after my attempt last year with Art Gran. This attempt, which had stopped only 500 feet short of the summit, had involved three days of rope placing, a retreat in the dark, and a bivouac in a snow storm. Late in July of this summer I arrived in the Bugaboos again, prepared to spend the rest of the summer, if necessary, climbing it. After several days of illness, I started packing gruelling loads to Boulder Camp and then up to the "Balcony," a large ledge some 250 feet up the face, gained by a vertical grade V chimney above the glacier. The loads, which were hauled up by rope, included 800 feet of rope for fixed lines and large amounts of hardware. The good weather now turned bad,

and I went down to the comfort of the cabin at the Forks where I spent a stimulating week reading Whitehead, Santayana, and Russell. The next four days of fair weather proved to be the only good spell of weather for the rest of the summer. I returned to the Balcony and spent the night there for an early start. Some 200 feet of III on a left traverse led to the start of the difficulties. The first lead of plus V went easily enough, although it offered one short artificial section, where I fixed a rope. I now studied the next lead, the "Black Stain" pitch, as this was the lead I feared most. I climbed an overhanging chimney until I had to swing out onto the narrow, overhanging right edge. My stirrups kept slipping off and I swung under to the right or to the left. I was quite ready to call it a day after this long, exhausting artificial pitch. Fixing a rope here, I now rappelled down the two ropes, then prusiked back up with a heavy load which threatened at all times to overturn me. After another night on the Balcony, I managed to reach a point some 1000 feet up the face over leads that, though requiring aid in a few places, were not as tiring as those of the previous day. As there was a ledge of sorts here, I returned for hardware, ropes, and bivouac equipment, and prusiked back up to spend the night here tied to a bolt. From this point there are three possible lines, all long dihedrals leading to easier ground higher up. The left one reaches easy ground the soonest, but like the middle one, is difficult of access. It is for this reason that we had selected the one to the right on our attempt of the previous summer, but we had found to our dismay that it led into a *cul de sac* of overhangs. I started placing bolts immediately above the bolt bivouac in an attempt to reach the middle dihedral. Twelve bolts later, in the late afternoon of the third full day on the face, I reached a chimney that led to it. Since the drill had become stuck in the holder, I was unable to change drills and used the same drill for all the holes. It was necessary to break the drill three times to get a sharp drilling edge, and after the third breaking, there was left a drill only the length of the bolt. If I had had to put in one more bolt, I would not have been able to proceed further since after the twelfth hole, the drill was a useless, blunt stub. This trick of drilling with a freshly broken drill, discovered quite by accident, worked well. The hangers on this pitch were left in for the benefit of future parties. As my piton hammer was coming apart, and being almost out of food and water, though so close to my goal, I decided to descend. Ropes were now fixed on all the pitches, and I reached the glacier in one hour. Upon my return to Boulder Camp, I was surprised by the unexpected arrival of Art Gran; we immediately decided he should accompany me on the final summit push. After several false starts during a full week of bad

weather, a clear day finally dawned, and prusiking rapidly, we reached my high point at nine A.M. A long, very narrow chimney formed by a flake was quite difficult enough (VI) without my pack. Inserting pitons proved nearly impossible. To save time Art prusiked with a heavy pack. Already two o'clock, we should have to hurry to avoid a bivouac. We gained the middle dihedral from the top of the chimney. Three long leads of artificial climbing in this corner brought us to what we thought was the end of the difficulties, some 300 feet from the summit. The climbing was now Grade III and IV. In gathering darkness and deteriorating weather, we hurried to a large ramp leading to the east ridge, 100 feet below the summit. We were momentarily stunned to find a 40-foot vertical wall at the end of the ramp. Art did a beautiful job leading this aid pitch in the inky blackness of the night, feeling the size of the crack with his fingers and then choosing the piton accordingly. In the end we had to bivouac on a small ledge right on the ridge, miserably cold and watching lightning on distant peaks. Dawn finally came, a cold gray dawn in which the sun never rose. At 6:30 A.M. we stood on the east summit feeling numb rather than elated.

EDWARD COOPER

Howser Peak, North Face, Bugaboos. Eric Bjornstad joined me to climb this seldom visited Bugaboo peak in late July. We crossed a bergschrund below and to the right of a giant, menacing ice cliff, then headed up a 50° snow finger between the ice and a rock face on the right. Several close avalanches, together with very unstable snow, gave us such a scare that we moved onto the rock face. This proved a dubious choice as the rock was so rotten that we dared not rope up as the mere action of the rope sent rocks down. We reached the top of this with relief and found firm snow for step-kicking leading up at 50° for 300 feet to the summit snowfield.

EDWARD COOPER

Pigeon Spire, East Face, Bugaboos. Although a threatening overcast obscured the sun on the cold morning of August 16, I joined Layton Kor, who had been considering this route for several years, and together we climbed rapidly to the lower left corner of the face. The first 1000 feet is a fantastically smooth slab at a constant angle of 60°, above which the face steepens considerably. We climbed 300 feet in a right diagonal line where we found a large ledge that crosses the face. Following this ledge right to its end, we ascended a left diagonal line for another 400 feet until

it was possible to traverse back to the right to the base of a left diagonal roof which we climbed in two leads, using direct aid, with a stirrup belay halfway. Two leads more of free climbing placed us at the top of the giant slab on a pedestal from which I managed to pendulum to a crack, and after a delicate lead of —VI, a belay spot was found. The next lead up an inside right corner was also strenuous. Using a piton that sank as I moved on it, I reached a good handhold that led to easier territory. The last problem was a short face leading to the righthand ridge. We reached the summit 300 feet above as the first flakes of snow hit us. The face had taken 8½ hours, and some 55 pitons were used to complete this climb, the longest on Pigeon Spire. The rock, in keeping with the Bugaboo tradition, was excellent.

EDWARD COOPER

Marmolata, Bugaboos. New Route on South Face. Gilbert Fryklund and I left Boulder Camp early on August 10 with the intention of repeating John Turner's route (1959) on the south face of Marmolata. (See *A.A.J.*, 1960, 12:1, p. 135.) After looking at the buttress close up, we decided that such a climb would prove to be more difficult and grueling than we would enjoy. Our thought then was to repeat John Brett's route (1959) on this same face, but, upon casual examination, another possibility became evident. About 500 feet to the left (west) of Turner's route, a steep rib rises from the glacier toward the true summit. Gil and I proceeded to alternate the lead up the crest of the rib. For the first five pitches, the problems were only moderately difficult (grade IV) and the climbing was delightful. The next pitch, a strenuous inside corner requiring three protection pitons (grade V), was overcome by a nice bit of leading on Gil's part. Above, the difficulty lessened except for a few short stretches of grade V. The climb terminated on the summit platform about two rope-lengths west of the summit cairn. Altogether, six pitons were used for protection in the ten pitches. It appears from an examination of the features of the face and correlation with published descriptions that this route crosses the Brett route about halfway up the face. It took us about 2½ hours to reach the foot of the climb from Boulder Camp, while the rock work lasted about 2½ hours more. We descended by the normal western route. This climb, with its variety of problems, may prove of interest to Bugaboo climbers of modest ambitions.

ROBERT KRUSZYNA

Ascents from the Lake of the Hanging Glaciers, Purcell Range. In August, Douglas and Betty Anger, Arthur and Claudia Maki and Bob and Peggy West visited the central Purcell Range, climbing from a base camp at the Lake of the Hanging Glaciers. Three small children were also taken to Base Camp: David West, age 3, and Susan and Peter Anger, age 2 and 4.

All of the peaks around the lake were ascended during the three-week trip. A route was found up the icefall from the lake to the Jumbo Névé, and from here Mounts Jumbo, West Guardsman and Karnak were climbed, the last by the northeast face, a new route. First ascents were made of "The Lieutenants," two peaks of 10,550 and 10,600-foot elevation immediately south of the Lake, and of a 10,000-foot peak northeast of Mount Maye. Granite Peak was climbed by a new route, the northeast arête. Ascents by standard routes were made of Starbird, Commander, and Maye. The Commander-Maye col was crossed and the Commander Glacier was resurveyed. Measurements showed that the glacier has advanced about 800 feet since it was visited in 1954.

During the expedition Art Maki and I took a five-day pack trip to visit a large unexplored snowfield west of the Lake of the Hanging Glaciers, between the Starbird Glacier and Duncan Lake. From the Lake of the Hanging Glaciers we descended into the valley of Horsethief Creek, and then followed this valley up to the terminus of the Starbird Glacier where we made our first camp. The next day we ascended the glacier and crossed the main Kootenay divide at a pass just north of Mount Monica. The route west from the pass led through rough, broken country to a lake at about 7800 feet, where we established our advance camp for the exploration of the snowfield. On the same day we made a side trip to ascend the unclimbed 9800-foot peak on the ridge leading west from the Starbird Glacier. On the following day we reached the snowfield (the "Macbeth Névé") in a little over three hours from the advance camp. After making the first ascent of the peak northeast of the névé, "Mount Macduff" (9800 feet), we crossed the névé to the south and climbed the highest peak of the group, "Mount Macbeth" (10,000 feet). We then returned to camp and on the next day packed out as far as the pass north of Monica. We returned to Base Camp over the Starbird Névé, climbing Monica, two 9800-foot snow peaks, and Mount Starbird en route. A complete account of the expedition will be published in the *Canadian Alpine Journal.*

ROBERT C. WEST, JR.

Findlay Group, Purcells. From Canal Flats, B.C. on August 7 Sy Ossofsky, Jon Shinno and I drove 17 miles up the Findlay Creek road and then backpacked another 25 miles on an old trail up Findlay, Granite and Morigeau Creeks. On August 9 we set up Base Camp at 7000 feet just below timberline in a beautiful park-like cirque complete with a lake at the head of Morigeau Creek. From here we climbed for the first time since 1953 Mount Findlay (10,400 feet) by the glacier on its northeast side and thence by easy rocks to the summit. We also made from this camp in one day the apparent first ascents of Morigeau (10,300 feet) via the east ridge, which was mainly a rock scramble with some steep snow, and Rowand (9600 feet) by its easy rock northwest ridge. After moving over the east ridge of Findlay to an 8000-foot timberline camp on a bench above the headwaters of Granite Creek, we made three more apparent first ascents. Clutterbuck (10,200 feet) was climbed by the glacier to the saddle between it and Lees and up a chute on the northwest face. Midge (9800 feet) was ascended by traversing snowfields to its north ridge, which was followed to the summit. After three days of storm, we climbed Lees (10,100 feet) by crossing the ridge between it and Midge to the southwest face and on up a ledge to the summit ridge. All three peaks, although not difficult, involved some roped climbing. We began the return trip on August 19.

BARBARA LILLEY

Northern Selkirks. On July 31 Colossal Enterprises reconvened near Downie Creek on the western side of the northern Selkirks. The party consisted of W. L. Putnam, W. Blesser, Paul Doherty, J. Williamson, W. Herlihy, J. L. Stackpole, S. J. Smith, H. Trapp, and B. G. Ferris, Jr. The purpose of the trip was to train and to pass on the qualifications of the participants for various grades of leadership as specified by the Leadership Committee of the Appalachian Mountain Club. The route went up Kelly Creek via horse trail to the snow which led to a col southwest of Carnes Peak. Beyond the col we had to cross an unsuspected valley before we reached the Carnes Glacier three days after starting. From this camp, an east-west traverse and first ascent was made of Phogg Peak (ca. 9000 feet on the east shoulder of Carnes and north of the col by Carnes Towers) and a second ascent was made of the South Carnes Tower. Carnes Peak was attempted by the south ridge but the first large gendarme presented more difficulties than we wished to cope with. The east ridge had two large clefts which deterred any attempts by that route.

At this camp, Blesser and Herlihy left the party for medical reasons,

and the seven remaining climbed the second col south of the South Carnes Tower and had a glorious glissade down the other side. A miserable bushwhack ensued followed by unsuccessful attempts to cross Dismal Creek by wading and by cutting two trees as fall-logs. A crossing was finally made two miles down stream on a natural fall-log and here's where we camped. Another day was required to bushwhack up from the Creek to the Downie Lake area, where we had a fine camp by a clear rushing stream that appeared out of the rocks at the head of the cirque and disappeared into a cavern at the top of the cliffs we had ascended. From this camp, the second and third recorded ascents were made of Mount Baal. Mount Moloch was attempted by the northeast ridge but snow conditions at about 9500 feet, 100 feet below the ridge, forced a retreat. We then crossed over the pass southeast of Sisson. The first recorded ascent was made of Sisson (9688 feet) although a sardine can was located on the top. Camp was made at timberline on the drainage to Tangier Creek. The next day we camped at Tangier Summit, and the day after at Sorcerer Pass. On the afternoon of our arrival at Sorcerer Pass, Peak A (8950 feet) north of Sorcerer Pass was climbed and the projected route reconnoitered. The party had been on restricted rations since leaving the Carnes Group because of limited food supplies. Because of this and as a result of the reconnaissance, we decided to curtail our plans and increase the food rations. We pushed on the next day in the hope of hitting a continuation of a high ridge that would swing around the Alphabet Group to Downie Peak. In the process, we climbed Follie Peak (ca. 8500 feet). Views from here were not encouraging: sheer cliffs ahead and a tedious rock ridge to the left that turned away from the direction we wished to go. Back down we went to camp at timberline. The next day we started for the Downie Creek Auto Court. We reached it four days later on August 18, but not until after we had rappelled down the last 60 feet of the cliffs which we had descended into the Sorcerer Creek valley, after we had bypassed a large forest fire, and after we had camped one night by sheer coincidence in the same spot where Putnam and his party had made their crossing of Downie Creek in 1956.

BENJAMIN G. FERRIS, JR. and WILLIAM L. PUTNAM

Kane Peak, Kokanee Group, Selkirks. In the latter part of June, Pat Hoadley, Stu Krebs, Stan Shepard and I packed in to the Joker Lakes in the Kokanee Group of the southern Selkirks. On June 23 we made what was apparently the first ascent of Kane Peak, the highest peak of the sawtooth ridge lying east of the lakes. From the upper end of the higher lake, we gained the southwest ridge of a small peak lying south of Kane

Peak. This corniced ridge was followed over the summit of the peak and then over another somewhat higher peak. Finally, steep snow slopes just east of the south ridge of Kane Peak led to its jagged summit ridge. We continued the traverse by descending near the north ridge and then glissading back down to the lakes.

WILLIAM J. BUCKINGHAM

Mount Stalin, Northern Rockies. The Royal Fusiliers (City of London Regiment) Canadian Rocky Mountains Expedition spent over six weeks in the mountains around Wokkpash Lake, which is 25 miles south of Mile 403 on the Alaska Highway. The range was little known, except to trappers and hunters, and had never before been climbed. The principal peaks, reaching 9500 feet in height, are Mounts Churchill, Roosevelt and Stalin, and there are hundreds of other peaks of comparable height. The unusual features of the expedition were that it was probably the first of its kind to be mounted by a single infantry regiment and the first to consist mainly of Other Ranks (enlisted men—*Editor*) instead of officers. The leader was Captain M. F. R. Jones and the deputy leader, Major John Biginell. The other four from the regiment were Sergeant Roy Lemon, Corporals Harry Rogers, Philip Hassett and Brian Holmes. We were driven up the highway in Canadian Army transport to Mile 403, where we began the walk into the mountains. The team now included Lieutenant Colonel S. W. Archibald, ex-C.O. of the 3rd Bn. Royal Canadian Regiment, which is affiliated with the Royal Fusiliers; Colonel Archibald is a practicing surveyor from London, Ontario, and as such was able to make a contribution to the scientific and topographic work of the party. He brought with him an old Cree Indian survey assistant called Sam Chappise. The walk-in occupied 2½ days of hard back-packing with 60 to 70 pound loads through thick bush and up the gravel flats of Wokkpash Creek. On July 23 we reached the chosen site of Base Camp at the head of the Lake. On the 24th the heavy stores and food were flown in by a Beaver float plane of the B.C.-Yukon Air Service. On our training climbs we encountered the principal hazard of mountaineering in the Rockies, loose rock. The first peak (9000 feet; 4 miles east of the south end of Wokkpash Lake) was so dangerous in this respect that we called off the attempt 750 feet from the summit. After that we concentrated on snow and ice peaks, after first training the four Other Ranks in snow and ice techniques. Thus commenced a series of ascents, of which, out of 16 attempts, 13 were successful. Nearly all the peaks required an approach march of several hours, largely through very rough country. One march also involved the crossing of a swift and

icy glacial river, an experience so impressive that we decided it would be impracticable to reach Churchill or Roosevelt Peaks, since this would involve crossing even bigger rivers. We therefore concentrated on the fine peaks surrounding Wokkpash Lake, culminating in the Wokkpash Ice Field and Mount Stalin. Our hardest climb—achieved at the second attempt—was on a fine ice peak which we have named "Fusilier Peak" (9000 feet; 7 miles northwest of Mount Stalin). This involved a long glacial approach and a final climb up a 400-foot ice wall of between 50° and 60°. To get on this wall at all we had to cross a wide crevasse and cut steps up vertical ice on the far side safeguarded by ice pitons to reach the higher upper lip. Despite its lack of experience the whole party managed this impressive place with great steadiness. Our highest peak was probably Mount Stalin itself, a big snowy mountain involving rather more hard work than actual difficulty. We also climbed "Merchant Taylors Peak" and "Mercers Peak" (both 8500 feet; 3 miles southeast and east of Mount Stalin respectively). West of Wokkpash Creek we climbed "Mount Devereaux" and "White Spur" (both 8500 feet; 4 miles north and 1 mile northwest of Mount Stalin); and east of the same stream "Spyglass Peak" (8500 feet; 4 miles northeast of Mount Stalin), "Red Ridge" (2 peaks) (7500 feet; 2 miles southeast of southern end of Wokkpash Lake), "White Ridge" (7000 feet) and "Long Mountain" (8500 feet; 1 mile and 3 miles east of the center of Wokkpash Lake respectively). Apart from the climbing, nearly 200 plant and 60 rock specimens were collected and Colonel Archibald undertook the triangulation of some of the higher peaks of the area.

M. F. R. JONES, *Army Mountaineering Association*

Lillooet Ice Field, Coast Range. Long approaches over rough terrain have preserved the Lillooet Ice Field area from exploration. Until 1960, only the perimeter of approximately 800 square miles of mountain and glacier had been explored. While making an aerial reconnaissance for Mount Raleigh (*A.A.J.*, 1960, 12:1, p. 133), we discovered a lake about a mile long which had been formed during the past ten years by the rapid retreat of the Lillooet Glacier. It lies 30 miles up the Lillooet River from Pemberton Meadows, some 100 miles northwest of Vancouver, B. C. On July 16 we set off from there at 2500 feet. In two days we followed the length of the Lillooet and Bishops Glaciers and then climbed up a glacier that flowed into the Bishop from the south. An advance camp was established there on July 17. The next day we made the first ascent of Mount Toba (9000 feet) up 60° to 65° snow slopes. On July 19 we made the

first ascent of Mount Compton (9250 feet) and on July 21 we made the first ascent of the highest mountain in the range, which we named "Archbishop" (9850 feet). We returned by the same route to be picked up on July 23. Fine weather assisted us. Many unclimbed peaks of over 9000 feet remain in this range, but large distances must be covered on foot to reach them because of the paucity of lakes in the area.

RALPH M. J. HUTCHINSON, *British Columbia Mountaineering Club*

Canadian Arctic

Cumberland Peninsula, Baffin Island. During the month of July Dr. Philip Gribbon and I conducted a rather unusual two-man expedition to the Canadian Arctic. We were flown to Cape Dyer, a DEW-line base on the Cumberland Peninsula of eastern Baffin Island. We packed 88 pounds over very bad terrain for about 20 miles into unexplored country and climbed six peaks and saw and named as many glaciers. The peaks were very spectacular and rose to 5000 feet. The whole region was magnificent and we had 24 hours of daylight during our three weeks there and excellent weather except for one day of high winds and another of fog.

BRIAN V. ROTHERY, *Alpine Club of Canada*

Axel Heiberg Island. Dr. Eduard Leuthold and I joined the Jacobsen-McGill Arctic Research Expedition 1960 from July 26 until August 18 on Axel Heiberg Island to survey, climb and provide medical care whenever required. On July 26 we finally arrived by air at Base Camp, situated on the shore of a lovely lake only a few miles from Expedition Fjord on the west coast of Axel Heiberg Island. There was plenty of activity there on the part of geologists, geomorphologists, botanists, surveyors, glaciologists and all sorts of scientists. Frequent arrivals and departures, lengthy discussions and organization of work hardly allowed Fritz Müller, expedition leader, even to exchange a few words with us on our arrival. Four hours later we were camped miles away on the upper Thompson Glacier (Most of these names have not yet been officially accepted.—*Editor.*) and the following day already saw us surveying nunataks.

The southern Swiss Range, about 20 miles northwest of Base Camp, runs in a north-south direction, roughly at right angles to the many glaciers flowing from the northern ice-cap. At the foot of the mountains these tributary glaciers combine to form a majestic mass of ice, the Iceberg Glacier, which makes its way to the southeast for 20 miles along the range to the fjords of the Arctic Ocean. Though we had hoped that there would be excellent springlike skiing, it was soon clear that we should have

to use crampons from bottom to top. Our first camp was established on August 1, again by Piper Cub, in a wonderful arctic meadow. Joined by Dr. Roland E. Beschl, we climbed Foundation Peak (4750 feet) by its fairly long east ridge, which offered pleasant climbing and step-cutting. The ridge between the east and main summits especially gave the feeling of unlimited freedom and space. Only the large crevasses on the top, which are typical for arctic regions, proved somewhat annoying. A firm cairn was built to facilitate surveying this summit from a distance. As we descended over the icefields south of Foundation Peak and all along the Brant Glacier, the sky gradually covered. After awakening from a good 15 hours of sleep back "home" (the whole trip had taken us about 27 hours), we found rain and dense cold fog covering the glaciers and summits; so it continued for five long days and nights. Finally the sun broke again through fog patches and clouds, just long enough to create some hope. And when it dissappeared for another two days, we had just arrived at the summit of Midnight Peak, in time to see Ellesmere Island in the east and Ellef Ringnes Island in the west still in bright sunshine. It was our plan to traverse from here over the long and spectacular ridges and peaks to Foundation Peak. We balanced over ice and rock to Foggy Top, Triangle and Airborne Peak in light snowfall with vertical drops to the glaciers on the left and steep ice slopes to the right. Since dense fog prevailed on the summit of Airborne Peak, next door neighbor to Foundation Peak, it became somewhat too mystic, cold and wet for us; and so we decided to find out whether the crampons would hold on the very steep and time-consuming east ridge. We reached camp 26 hours after departure. A few hours later the Piper Cub made an end to our days in the Swiss Range.

From now until the end of our stay in Axel Heiberg, the weather remained perfect, but no plane was at that particular moment available for a ski landing near our desired objectives, the Trinity Peaks. We spent the last days of our precious leave surveying. Thanks to the courtesy of Dr. Jacobsen and the desperate efforts of Fritz Müller, we were fortunate enough to add another climb to our list: The White Crown (ca. 6890 feet), the highest peak of Axel Heiberg. On our way to Eureka and home, we were landed on the ice-cap about 600 feet below the summit, which is situated right at the western edge of the ice-cap. It was fairly late in the day when we arrived at the summit, where, after a two-hour siesta, the two airplanes circled us, signaling to pack up and come down. Only after they had landed far below, could we separate ourselves from the superb view and ski down through excellent powder snow to the man-made birds, which carried us off only minutes later.

JÜRG MARMET

GREENLAND

Staunings Alps, East Greenland. Sir John Hunt kindly invited me to join his expedition to Greenland this summer. The expedition was sponsored by the National Association of Mixed Clubs and Girls' Clubs in conjunction with the Duke of Edinburgh's Award System. The object was to explore and climb in the Staunings Alps in Scoresby Land on the north-east coast of Greenland between 21st July and 31st August. Our party consisted of a senior group of mountaineers and scientists and a junior group of 21 boys who were all at work and not at school or university. It was considered that, apart from its value to science and geography, the expedition would be of significant value in the service of youth.

We flew by chartered plane from Iceland to Mesters Vig, where the Danes have a small lead mine, and from here we set out in groups about our various tasks. Much of our travel was done by boat, dodging through pack-ice and icebergs, to make our way up into the fjords to the very foot of the glaciers coming down from the mountains we planned to climb. During the weeks that followed we walked for several hundred miles and climbed many thousands of feet. There were no Sherpas here to help us carry our gear and so our packs were always too near to the 80-pound mark to be comfortable!

When the time came to return, we had a fair list of achievements to our credit: First ascents were made of thirteen peaks in the central and south Staunings. On a further peak a party of four of us was forced to turn back when a big cornice broke, resulting in a very narrow escape for Sir John Hunt and Alan Blackshaw. One of the first ascents was a particularly fine climb of the second highest peak in the range, Hjørne, 9449 feet, by Dr. Malcolm Slesser and Ian McNaught-Davies, supported by Sir John Hunt and John Jackson. The summit pair traversed the mountain by its west and south ridges, and this involved a climb of 28 hours on exceedingly difficult rock. We also traveled and explored extensively on the glaciers. This included a first crossing of the central Staunings from west to east via the Bersaerker and Gully Glaciers and the exploration of the hitherto unvisited south Staunings, where some long glacier journeys were undertaken and five of the first ascents mentioned above were made. An extensive programme of glaciology was carried out and the ornithologists studied the Arctic Tern and other bird life. Finally, during the last ten days of the expedition, George Lowe and I took Lady Hunt and her daughter, Miss Susan Hunt, with four of the boys on a 200-mile journey to Syd Kap, with the idea of visiting a summer colony of Eskimos who come there each year to hunt whales. We were disappointed, however, for they

had decided not to use the base for hunting this year. The polar bears had beaten us to it, and all we found were the damaged huts where the Eskimos had lived in previous years! But the journey had not been in vain, for the Schuchert valley, through which we passed, is said to be one of the most beautiful in Greenland during the arctic autumn, for already, at the end of August, summer in the Arctic was at an end.

The other members of the senior group were Roderick Cameron, Dr. David Jones, J. C. G. Sugden, Tom Weir, Dr. Iain Smart, David Roach and Francis Gwatkin.

H. R. A. STREATHER, *Alpine Club*

Umanak District, West Greenland. In June, July and August the late Piero Ghiglione led a small Italian expedition which explored the region between 71° and 73° north latitude on the west coast of Greenland. These mountains were relatively unexplored from a climbing standpoint. With his companions, C. Mauri and Dr. G. Gualeo, the doughty 77-year old veteran made four first ascents, among others that of the highest point on the west coast. It took 18 hours to climb this 7579-foot peak. It is with great regret that we must report the death in an automobile accident on October 15 of this renowned mountaineer and explorer.

Sukkertoppen, Southwest Greenland. Another Italian expedition under the leadership of Guido Monzino made two first ascents near the Evighedsfjord. A Danish expedition operated in the same region. This was under the leadership of Carsten Berg-Sørensen and was composed of Erik Hoff, Jens Jensen, Knut Kløverfeldt, Joe Rolf Pedersen and E. Robert Rasmussen. They made some 14 first ascents of peaks from 2600 to 6330 feet. Five were in Hamborgerland, five in Sermilinguaq district and four above Evighedsfjord.

SOUTH AMERICA

Ecuador

Oxford University Exploration Club Expedition. P. J. Grubb, leader, M. R. Emerson, Dr. R. H. Johnson, J. R. Lloyd, T. R. Pennington, and T. C. Whitmore visited Mount Antisana (18,886 feet) and the foothills east of it from early July to mid-October. We were primarily interested in the botany of the region. We made a detailed survey of two forest areas, one near Borja at 5600 feet and the other near Tena at 1800 feet, a general survey of the paramo vegetation from 13,000 feet to snow line,

and a detailed survey of the main, largest ice-tongue on the western side of Antisana and one farther north. On August 6 Emerson and Johnson attempted an ascent of Antisana (first ascent by E. Whymper with J. A. and L. Carrel, March 9, 1880.—*Editor.*) in the company of members of the Club Nuevos Horizontes in Quito under the leadership of Sr. Jack Bermeo, who climbed the mountain in 1952. Bermeo's previous route up the northwest face was followed, but it was found that a schrund 100 to 200 meters below the rounded summit was now impassable, a substantial snow-bridge having disappeared. It might still be possible to climb the mountain by a long traverse to the eastern side and the end of this schrund, which is fully 30 feet wide. The western glaciers are all severely crevassed.

PETER J. GRUBB, *Oxford University Exploration Club*

Cambridge Ecuador Expedition. The Cambridge Ecuador Expedition spent eight weeks in Ecuador between June and August. The geographers, John Russell, John Stone and Peter Hopley, carried out a land-use survey in the vicinity of Baños, a small town situated at 5800 feet on the Pastaza River where it cuts a deep gorge through the eastern Andes, in its course to the Amazon. The zoologists, Tony Wright and Bill Erasmus, were collecting Chiroptera and small rodents for the British Museum; they brought back eight different species of bat and a variety of small rodents as well as the parasites associated with them. They did some of their collecting at Baños but also ventured into the interior Oriente to Puyo. From there they canoed down a tributary of the Amazon to Canelos. Another part of the geographers' programme was the ascent of Tungurahua (16,693 feet), an active volcano, though at present quiescent, rising to the south of Baños, which it has devastated on several occasions. The recognized route is up the north face which is relatively straightforward. The final 1500 feet are snow-capped and very steep. Climbing conditions are at their best from October to May during the dry season. Our stay, however, coincided with the wet season, but luckily a week of fine weather came to our rescue. As we had had little mountaineering experience, we were fortunate in having as our guide Jorge Montalvo, who has ascended Tungurahua no less than 20 times and so probably knows it better than anyone else in the world. At five A.M. on July 21 we set off from Baños to climb the 7000 feet to the camp. There we met Jorge, who with two Yugoslav students had that day been foiled in their summit assault by high winds. As the mist cleared, spectacular views over the Andes were unveiled. To the east, the distant Oriente jungles and to the west, Chimborazo were a magnificent sight at sunset. After a 4:30 start we shortly reached the upper vegetation limit,

and then began the tiring climb on cinders and ashes—up two steps, slip back one. Since I was finding breathing the rarefied air particularly difficult, regretfully I returned to camp for they wanted to reach the summit by 10:30 and start down before the noonday sun started melting the snow. On crampons and roped, they gradually made their way to the summit. Unfortunately soon after dawn a thick mist came down and their view from the summit was completely masked. They could not even see across the larger of the two craters, but they were warmed by the heat and smoke rising from the bubbling fumeroles, which melt most of the snow around the crater.

JOHN F. A. RUSSELL, *Christ's College, Cambridge University*

Peru

Climbs above the Quebrada Ulta, Cordillera Blanca. On June 28 the Californians, Henry W. Kendall, Carl Heller, Ernst Bauer, John Lomart and Dave Brown, were joined in Carhuás by their Peruvian porters, Macario Angeles, Octaviano Zuñiger and Pablo Morales, and moved up the Quebrada Ulta to establish Base Camp. By July 2 they were camped at 14,000 feet near the lake below Chekiacraju. The whole party made the second ascent of this 17,342-foot peak the next day. (First ascent by Ayres, Ortenburger, Whitmore, Macario Angeles in 1958. See *A.A.J.*, 1959, 11:2, p. 180.) From this camp they reconnoitered an unclimbed, unnamed peak and found the route to the summit ridge. On the very day they were to set up Camp II, Bauer came down with congestive heart failure and had to be evacuated. After a short delay, the camp was established, but Heller came down with apparently the same ailment and the attempt was abandoned. The climbers then turned to Chopicalqui (20,998 feet) in hopes of reaching the west ridge from the Quebrada Ulta and of joining there the route followed by the two successful parties, who had ascended from the Quebrada Llanganuco (also, but less correctly, spelled Yanganuco). Deep powder snow and steep slopes complicated the ascent, but Kendall, Heller and Bauer finally established themselves in camp near the west ridge. Steep slopes and bottomless powder snow defeated the first attempt to climb higher well below the summit. Two days later in poor weather they reached the summit cone. The slope climbed by the American party in 1954 had avalanched off, leaving an overhanging ice wall. They then tried to ascend a vertical ice wall down the ridge on the south side, but because the ice was so rotten that ice pitons would not hold, they had to turn back from there, only 100 yards from the top. During the last three days in the region, they reconnoitered a route on the Nevado Ulta. Though

they crossed the ridge between the Nevado Ulta and Contrahierbas and descended into the Quebrada Cancaracá Chico, they found the traverse to the base of the Nevado Ulta cut off by a series of icefalls and a cliff which they did not have time to try.

Allinccapac, Cordillera Carabaya. As a result of glowing reports of the climbing potential brought back by the British Museum Expedition to the Cordillera Carabaya in 1959 (*A.A.J.*, 1960, 12:1, pp. 145-146.), we also decided to visit this area of southern Peru. The Carabaya is an isolated mountain group to the east of the Cordillera Vilcanota and about 100 miles to the north of Tiripata, the nearest railway halt. The party consisted of Dr. Robert E. Kendell, the expedition doctor, Dr. Nigel A. J. Rogers, John Cole, Michael S. Binnie and myself as leader; we had all been to Oxford at some time, although Bob's visits had been as a guest from Cambridge, and thus we called ourselves the Oxford Andean Expedition 1960. Our main objective was Allinccapac (19,250 feet), which had been attempted on two other occasions but without success. (The Peruvians Grimaldo Murillo and M. Tomayconza claim to have made the first ascent of this peak on July 13, 1959. However there are some doubts in Peru as to the authenticity of their claim.—*Editor.*) Base Camp was established on July 19 in the Valle de Antahua at a height of about 15,000 feet after a tedious journey by plane, bus, plane, lorry, and finally llamas. The south face of Allinccapac appeared quite impossible, raked as it was by small avalanches and threatened by enormous cornices. A possible route had been reported by the previous year's expedition, but this lay over a col and around on the northern face of the mountain. Without delay a camp was established on this col at a height of 17,200 feet and reconnaissance went out from here. The prospect was not good; the impregnable walls and cornices continued. On the flat, snowy pampa at about 18,000 feet we made our second camp with a view to crossing yet another col and examining the fourth and last side of the mountain. This was in fact more promising and a steep couloir led up to the summit ridge. This route was taken by Kendell and Binnie on July 25 and led them to the top by way of the steep and corniced summit ridge and onto the flat mesa-like summit plateau. The summit itself is a big, flat ice cap several hundred square feet in size set on sheer rock walls. The ascent was repeated by the three other members two days later. Camp II was surrounded by a magnificent cirque of snow mountains. Huaynaccapac (18,700 feet), immediately north of camp, has two summits. The lower of these (18,650 feet) was climbed in August by two routes simultaneously. Cole and Rogers ascended the northwest

ridge while Kendell, Binnie and I climbed directly up the west face, which, after gaining initial height by an easy snow shoulder, involved only about 300 feet of actual climbing. Yet, the angle was steep, about 60°, and crossing the bergschrund required a few feet of tension climbing on vertical ice. After that, tedious but straight-forward step cutting on the hard snow was all that was needed to see us to the top. Towards the end of the expedition Cole and Kendell climbed the second and slightly higher peak in an hour from Camp II by way of an easy snow slope and col. In August Rogers, Cole and I ascended "Recce Peak" (18,000 feet), which lies northeast of Allinccapac II, in an attempt to find possible routes up four 18,000-foot, fantastic rock and ice towers, which we called Screwdriver, Wedge, Tower and Cornice and which lie between Allinccapac and Chichiccapac. The next mountain of the cirque northwest of Huaynaccapac was Tococcapac (18,600 feet). The route for this was prepared that same day by Kendell and Binnie, who blazed a trail in neck-deep powder snow up the south face to a col between Juraccapac (18,400 feet) and Tococcapac and continued the final fifty feet west from the col to the summit of the former. During the night the snow consolidated and made it possible for Rogers, Cole and me to continue the route to the top of Tococcapac from the col by way of the northwestern ridge. Crossing a gap entailed a steep descent for a hundred feet, followed by a traverse below the ridge-top to pass the obstacle. Spectacular climbing continued along the ridge until it brought us to a fantastic ice cave immediately below the summit. We went through the cave and found a steep way up the final few feet on the far side. Meanwhile Binnie and Kendell climbed Allinccapac II (about 19,000 feet), which lies southeast of the main peak; this they did by the northwest face and it involved about 1000 feet of steep cramponing to the top. The only peak in the cirque which wasn't climbed was "Trident", the peak farthest west. A reconnaissance was made of this peak, but although a possible route was found up the steep southeast face, it was decided that the objective dangers of the approach to this face made it unjustifiable. In August Rogers, Cole and I made the complete north-south traverse of Japuma (18,300 feet), including the rock peak to its south, Cacaccapac (17,800 feet). This was a new route on the twice previously ascended Japuma. (First ascent by P. B. Fischer and Mr. and Mrs. G. H. Francis in 1954. Second ascent by P. Ghiglione and F. Mautino in 1959.—*Editor.*) Two days later "Pico Carol" was climbed by Rogers, Binnie and me when we evacuated Camp II. This 18,750-foot peak stands out as a prominent gendarme on the east ridge of Allinccapac as seen from Base Camp. From the summit we had an incredible view of the overhang-

ing ice cap of Allinccapac, only 200 yards away. The expedition left the Base Camp area on September 1, having made nine first ascents and ten new routes.

K. I. MELDRUM, *Oxford University Mountaineering Club*

Franco-Swiss Peruvian Andean Expedition. The Franco-Swiss Peruvian Andean Expedition, composed of Dr. Roger Bretton (Annemasse, Haute Savoie), Robert Gréloz (Annemasse and Geneva) and René Dittert (Geneva) was joined in Peru by Félix Marx, a Swiss climbing friend living in Puno. A week after our departure from Geneva, we were able, on July 1, to establish our first camp at 13,650 feet in the place called "Ancas," having left from Calca on the Río Vilcanota, north of Cuzco. After reconnaissance principally beyond the Lares col, our group, on July 5, made the first ascent of the Cerro Sunchubamba (16,768 feet) opposite the massif of still unclimbed Saguasiray (ca. 18,700 feet). From this summit we realized that Saguasiray, which was to have been our chief objective, presented too great difficulties for a light expedition that had as little time as we did. We then headed toward a group of the Cordillera Vilcabamba. On July 18 we succeeded in making the second ascent of the Nevado Yucay (18,535 feet). (This was called the "Nevado Miguel Grau" by the Italians from Como whose first ascent in 1958 was reported in the *A.A.J.*, 1959, 11:2, p. 321. This name, like so many others given by Italian expeditions, is not official. There is no logical reason why a personal name should supplant the existing local name as the Italians suggest doing in this case. The Editor also strongly suggests that if a Peruvian peak is not yet named, it should at most be given a Quechua or at least a Spanish name which has some local significance. M. Dittert reports that he has been informed by the subdirector of the Topographical Institute in Lima that the Institute would not accept the type of name given by the Italians as official. *May this confusing and tactless practice cease.* As for the altitude, it is not known how the Italians determined theirs of 5650 meters, but it is believed that it was by aneroid barometer. The Franco-Swiss party had an aneroid reading of 5450 meters or 17,881 feet.—*Editor.*) Though our camp was really too far distant, we reached the summit after a long flank march which took us to the San Francisco Glacier and then along a beautiful corniced ridge. We left camp at 14,750 feet at eight A.M., reached the glacier at noon, the col (16,750 feet) at 1:30 P.M., and the summit at four. We were back in camp at 9:30. The Nevado Yucay, as it is called locally, is the highest summit of the Yucay group.

After these two climbs we gained the Cordillera Apolobamba, near the Bolivian frontier, from Puno on Lake Titicaca. A truck carried us to Rinconada, a gold mining community whose inhabitants belong to the ethnic group of Aymaras and live at 16,400 feet. After reconnaissance and leaving a food and supply dump, on July 23 we made the second ascent of the Nevado Ananea (19,200 feet. First ascent by G. Frigieri, R. Merendi, C. Zamboni in 1958. *A.A.J.*, 1959, 11:2, pp. 321-2.—*Editor.*) After leaving Rinconada at 4:30 A.M., in two hours we descended to the base of the ridge where we had left our supplies at 15,250 feet. The ridge was some 2½ miles long but fortunately without great technical difficulties. We reached the summit at two P.M. We had descended the ridge by five and climbed back to Rinconada by 8:30.

Climatic conditions are generally good in southern Peru during the winter of the Southern Hemisphere (summer in Europe and the U. S. A.); this year, however, it seems that they were exceptionally favorable since the weather was very beautiful for our whole stay. The health of the four members of the expedition, whose ages totaled 210 years, was excellent if you discount some minor dysentery caused by eating doubtful local food.

RENÉ DITTERT, *Swiss Alpine Club*

Yanahuanca, Cordillera Blanca. The Brazilian Domingos Giobbi of the São Paulo Alpine Club made the first ascent of Yanahuanca (17,340 feet) on July 14 with the Peruvian Eugenio Angeleş. On the next day they climbed Caullaraju North (17,764 feet), which had been ascended once before.

CÉSAR MORALES ARNAO, *Club Andinista Cordillera Blanca*

Balmat, Cordillera Blanca. The French Cultural Attaché in Lima, Olivier Dollfus, and François Megard with the Peruvian, Eugenio Angeles, made the first ascent of Balmat (18,045 feet) on July 29 and the third ascent of Ishinka (18,373 feet) on July 27.

CÉSAR MORALES ARNAO, *Club Andinista Cordillera Blanca*

Attempt on Pucahirca Central, Cordillera Blanca. Under the leadership of Bruno Berlendis, an expedition of the Bergamo section of the Italian Alpine Club made an unsuccessful attempt on Pucahirca Central (19,718 feet). On June 10 they established Base Camp at 15,400 feet on a moraine of the Taulliraju Glacier. Camp I was at 17,400 feet on a col between the west ridge of Taulliraju and an unclimbed peak above the Quebrada Santa Cruz. Camp II was at 18,375 feet and Camp III at 19,350 feet, but

the attack on the mountain failed because they were unable to climb the last 50 feet of the west ridge up sheer, but rotten, ice. On June 29 Santino Calegari, Nino Poloni and Oddone Rossetti made the first ascent of a peak they called "Nevado Bergamo" (19,128 feet) and on July 9 the same climbers and Andrea Farina reached for the first time an 18,996-foot summit, which they called "Juan XXIII" for the present Pope. They also climbed two peaks (17,192 and 17,487 feet) in the Taulliraju group. The other members of the expedition were Dr. Franco Chierego and Franco Rho.

Peruvian Expeditions. The following expeditions were carried out by Peruvian climbers during the course of the season. First ascents: Rajuntay South (17,553 feet) in the Cordillera de la Viuda on June 29 by Benjamin Morales Arnao and Alfredo del Arroyo; Alcoy (17,553 feet) also in the Cordillera de la Viuda on July 30 by Lorenzo Polanelli, Adriano Neri, Alfredo del Arroyo, Alberto Canaval Prentice and Alberto Ruibal; Chicón North (17,061 feet) in the Cordillera Urubamba on June 17 by Julio Morales Pajuelo, Juan Rivas, Guido Ortiz, Luis Calderón, Américo Cuno, Francisco Apaza and Asisclo Salcedo; Churup North (17,454 feet) in the Cordillera Blanca on August 4 by François Megard, Hugo Vargas and Arturo Soriano; Huaytapallana (17,061 feet) in the Cordillera Huaytapallana on July 12 by Inocencio Mamani, Gottardo Aguero, Alejandro Calderón Cárdenas, Armando Ramos, Julio Contreras and José Luis Loredo. This group from the Communal University of the Center at Huancayo made studies on the variations of methylene blue at different altitudes. They were also accompanied by José Aguero, Vidal Palacios Quintana and Teófilo Hinostroza. The third ascent of Urcos (17,061 feet) in the Cordillera Central on September 14 was made by Helene Ferro and Arturo Soriano. They left from Anticona and made observations at Ticlio. The following fourth ascents were made: San Andrés (17,489 feet) in the Cordillera Central on May 8 by Olivier Dollfus, Alfredo del Arroyo, Arturo Soriano, Helene Ferro and Curt Fliess; Ishinka (18,373 feet) in the Cordillera Blanca on August 15 by François Megard, Eugenio Angeles and C. MacArthur. On August 16 Hugo Vargas, Arturo Soriano and Segundo Pérez made the sixth ascent of Carhuac or San Cristóbal (16,420 feet) in the Cordillera Blanca. They measured the recession of the ice, which averaged 4 meters (13 feet 1½ inches) for five years or 80 cms. or 31½ inches per year. A similar average was found on the Nevado Yarupa in the Cordillera Raura, a source of the Marañón River.

CÉSAR MORALES ARNAO, *Club Andinista Cordillera Blanca*

Camballa Este, Cordillera Vilcabamba. The Argentine, Manuel Puentes, and the Peruvians, Julio Pizarro and Bernhard Muyhan, on October 1 made the first ascent of Camballa Este (17,323 feet) in the Pumasillo group.

CÉSAR MORALES ARNAO, *Club Andinista Cordillera Blanca*

Peruvian Clubs. The Club Andino Peruano was founded on December 12 in Lima. The directors are presided over by Robert Stern. I am acting as secretary. (Until now, the Club Andinista Cordillera Blanca has been the most prominent Peruvian club. It is this club which publishes the excellent and informative *Revista Peruana de Andinismo.—Editor.*) Also the Club Andino Urubamba has been formed in Cuzco under Julio Morales Pajuelo and the Club José Gálvez in Cajabamba under Francisco Fernández Ortiz.

CÉSAR MORALES ARNAO, *Club Andinista Cordillera Blanca*

Cordillera Blanca. Dr. Duane Ewers made two ascents in the Cordillera Blanca, the exact identification of which is not altogether certain. With François Mégard of the French Embassy in Lima, and the Peruvian porter, Eugenio Angeles, he climbed a peak at the head of the Quebrada Ishinka to the south or southwest of Palcaraju. This may have been a first ascent or may have been the fourth ascent of Palcaraju Oeste (West). With Angeles and another Peruvian porter, Dr. Ewers made what appears to be the second ascent of Pisco Este. The Swiss, Max Ehrensperger, Max Riegg and Victor Rutishauser, joined Dr. Ewers on two unsuccessful attempts on Huascarán, but they were turned back because of bad weather.

Bolivia

Mexican Expedition to the Cordillera Real. The Mexican Expedition to the Bolivian Andes visited the Cordillera Real during the winter months of June, July and August and reached eight important summits. Three of these were in the Illimani group. On July 17, we had the opportunity to attack successfully a virgin peak located in the western part of the main group. At the same time other members of the party climbed two other summits of the range. Hugo Olavarrieta, with the Bolivian, Douglas Moore, made an ascent of the southern peak (21,200 feet) and the Bolivian Alfredo Martínez climbed the central summit (ca. 20,400 feet), while Adrian Aponte with the Bolivians Douglas Moore and Hector Lazarte made the first ascent of the point we called "Cumbre Manuel Hidalgo" (ca. 20,000 feet). We next visited the region near Condoriri, a lovely

peak in the center of the range behind the Huayna Potosí group. Olavarrieta, the Englishman Tony Inglis, and the Bolivian Moore, on July 25 ascended an unclimbed peak, the Aguja Negra, which we renamed "Pico Independencia Mexicana" (ca. 17,700 feet). They enjoyed a delightful climb on both rock and ice amid scores of difficult and beautiful peaks. In the same region, Adrian Aponte with the Bolivian Martínez made the fifth ascent of Huallumen (ca. 18,375 feet) on July 21. Before visiting Illimani, we climbed in the Zongo region near Huayna Potosí, where the Bolivians Moore and Jorge Portugal and the Mexicans Aponte, Olavarrieta and I had the opportunity on June 18 to make the first ascent of a peak we called "Cumbre Fraternidad" (ca. 17,900 feet), which rises above the Lago Canada, one of the many lakes, formed by melt water, which make this region a true climber's paradise. On the same day Moore and Aponte also climbed Cuna Tincuta (ca. 18,375 feet), while the Mexicans Sergio Hernández de la Rosa and Carlos Olivares Valderrabano, with the Bolivians Walter Galindo and Alfredo Martínez, ascended Cuticucho (ca. 17,060 feet). Both of these peaks had been climbed a number of times before.

ANTONIO ROMERO BENAVIDES, *Federación Mexicana de Excursionismo*

Chile

Cerro Tronco. Two members of the Club Alemán de Excurcionismo in February made the first ascent of the Cerro Tronco (18,080 feet on some maps and 18,373 feet on others), which lies on the Argentine border east-northeast of Santiago. To accomplish this climb they had to traverse from the Cerro Risopatrón (18,872 feet). The Cerro Tronco, which had been one of the few yet unclimbed peaks over 5000 meters in Central Chile, had been unsuccessfully attempted at least four times.

EVELIO ECHEVARRÍA

Chilean-Japanese Expedition to the Central Cordillera. The expedition which was still in the field when the last *A.A.J.* went to press (see *A.A.J.*, 1960, 12:1, p. 151) added to the list of first ascents already reported the following, all of which were in the Río Colorado valley, northwest of Portillo, the ski resort: Cerro Expedición (16,733 feet), Cerro Amarillo (16,575 feet), Monjas (15,020 feet), Columpios del Diablo (both peaks, ca. 14,100 feet). They also made the second ascent of the Nevado Leiva (15,290 feet). Participating were the Japanese N. Ota, H.

Tamba, H. Toyoda, and the Chileans, J. Bocaz, H. Duránd, L. Gamboa, G. Mills, G. Muga, and M. Puig. This phase of the expedition took place from March 10 to April 4.

EVELIO ECHEVARRÍA

Cerro O'Higgins, Patagonia. A party sent by the Federación de Andinismo de Chile to the area forty miles north of FitzRoy made the first ascent of the Cerro O'Higgins (9547 feet) on January 16. The climbers, W. Espinoza, E. García, C. Marangunic and F. Vivanco, established six camps on the mountain.

EVELIO ECHEVARRÍA

Chilean Ascents. Juncal (20,046 feet) was ascended via the northwest glacier by the Chileans Espinoza and Vivanco in early 1961. This route had been previously ascended only by the Italians in 1934. The Chileans Tangol and Vásquez made the first ascent of the south peak of Morado (16,601 feet) by its south face.

Sad news comes from the British expeditions to Patagonia. Peter C. Henry has perished tragically in Lake Nordenskjold.

BIÓN GONZÁLEZ, *Federación de Andinismo de Chile*

Argentina

Cerro Catedral Group. Two more climbs of extreme difficulty were made in the Catedral group near Bariloche, both new routes. In March Anselmo Weber and Carlos Bottazzi climbed the Torre "La Vieja" shortly before Weber and Teodoro Sifuentes climbed the much longer front face of the Aguja Frey. These two routes represent very difficult technical problems, which could be solved only by the use of modern climbing methods.

VOJSLAV ARKO, *Club Andino Bariloche*

South face of El Plata. Four Polish climbers living in Buenos Aires undertook to climb the extremely steep, difficult and rock-swept south face of El Plata (19,784 feet) above Mendoza. Perhaps the only comparable climb to it was the French ascent of the south face of Aconcagua in 1954. It must be remembered that south faces in the Andes are like north faces in the Northern Hemisphere. Indeed in his communication to the editor, Pablo Dudzinski states, "In some ways it is something like the north face of the Eiger; although technically not so difficult, it has continuous rockfall and ice avalanches, which make the ascent very hazardous. It is also a trap, for once on the wall it is possible to move only upwards or down,

since all routes that traverse are swept by avalanches." Dudzinski and his companions, Estanislao Blicharski, Dr. Andrés Pastewski and Jorge Peterek, established Base Camp in the Las Casas valley on January 30, 1961. From Camp I at 14,000 feet they carried out a ten-day acclimatization program. On February 10, after crossing an extensive field of *nieves penetentes,* they attacked a very steep rib which rises at an average of not less than 65° up most of the 5500-foot high wall. In excellent weather they climbed some 2400 feet during that day and carved out a platform for their tent in the ice. From there they decided against crossing to the left glacier that descends the face because of its "forest" of *penetentes* and planned to continue straight upward despite the rockfall danger. On February 11 they climbed 1000 feet in 17 hours. During this day Dudzinski became bothered by the beginning of an attack of appendicitis! The next day he felt somewhat better and the attack continued, but after some hours, it was obvious that he would have to be evacuated. In deteriorating weather the day was spent in trying in vain to find a suitable escape route, for they hoped to avoid the descent down the line of ascent, which was threatened by rockfall. Finally on the morning of the 13th the party split, Dudzinski and Dr. Pastewski descending, while the other two continued upwards in a snowstorm and endangered by fresh snow avalanches. At five P.M. the clouds cleared although high winds persisted, and the two climbers found themselves on the final ridge. They reached the top an hour later. While descending the easier northern side, they were halted by utter lack of visibility because of clouds only 400 feet below the summit. On the next day they stumbled through the fog and completed their descent into the Quebrada La Angostura rather than to El Vallecito, which had been their objective. Both groups managed to get to Mendoza late the next day.

Cerro Pier Giorgio, Patagonia. The Cerro Pier Giorgio (ca. 9500 feet) lies northwest of Lake Viedma, closing in on the north the valley of the Torre Glacier. This glacier descends from Pier Giorgio between FitzRoy and the Cerro Torre, which are situated about three miles southeast and south of the former. The first of two expeditions organized by the Centro Andino Buenos Aires ascended the Río FitzRoy to the Laguna Torre in mid-January, 1960. They established Camp I at the foot of the Cerro Mocho and Camp II on an icefall of the Pier Giorgio Glacier. It stormed continuously in February and the attempt had to be abandoned in early March.

The second group, consisting of Juan José Quintas, leader, Osvaldo Biondini, Carlos Bottazzi, Oscar Reali, Leda and Luis Tofanelli, left Buenos Aires by air on December 4, 1960. Again very adverse weather

conditions prevented the ascent. Base Camp was pitched on the shores of the Laguna Torre, Camp I below the Cerro Mocho, Camp II at the base of the Aguja Cuatro Dedos and Camp III at the foot of the rock wall of the peak itself above the icefall of the Pier Giorgio Glacier. Having established the camps by the end of December, the climbers could discern a direct route up the rock wall that offered hopes of success. Climatic conditions, especially the hurricane winds which are characteristic of the region, prevented a final assault. There were only four good days scattered through the eighty-two spent in the field.

JUAN JOSÉ QUINTAS, *Centro Andino Buenos Aires*

AFRICA

Sierra Club Ruwenzori Expedition. (Although this group made no first ascents, it is included here because the region has not been visited often by Americans.—*Editor.*) On this fifth in a series of informal expeditions sponsored by the Outing Committee of the Sierra Club, the 17 members met in Kampala, Uganda, on July 19. We approached Base Camp above Bujuku Lake by the usual three-day route from the Ibanda roadhead, northwest of Kasese. For the carry to Bujuku, 75 porters were required and five of these generally excellent men were retained for work higher. Because of the variety of vacation plans, not all members remained in the mountains for the full three weeks. Even so, enthusiasm and remarkably fine weather allowed the following ascents to be completed between July 22 and August 10: Speke Group, west face of Vittorio Emanuele Peak (16,042 feet), normal route from Bukuju; Baker Group, Edward Peak (15,889 feet), normal route from Kitandara Hut; Luigi di Savoia Group, Weismann Peak (15,157 feet), normal route from Kitandara Hut; Stanley Group, Margherita Peak (16,763 feet), normal route from Elęna Hut, Moebius Peak (16,134 feet), south to north traverse, and Alexandra Peak, south to north traverse. Much of the success and pleasure of the trip was due to the kind hospitality, help and advice of members of the Mountain Club of Uganda. The trip was organized on a non-profit basis with expenses shared by the members. The median cost was $590, round trip Kampala, but did not include personal equipment and travel costs to Africa. The trip was organized and led by Douglas R. Powell and Alfred W. and Gail Baxter. Other members were Ija Korner, James Bennett, Stanley Birge, Robert Elliott, Lothar Kolbig, Michael and Phyllis McMillan, Margaret Prouty, John Tupper, Michael Wright, Christopher and Mary Young, Fletcher Dutton, and Nicholas Ellena.

ALFRED W. BAXTER, JR.

ASIA

Tibet

Mount Everest from the North. The Chinese propaganda magazine, *China Reconstructs,* of August, 1960 states that on May 25 the Chinese Wang Fu-chou and Chu Yin-hua and the Tibetan Gonpa reached the summit of "Mount Jolmo Lungma, the world's highest peak." An expedition of 214 Chinese and Tibetans was led by Shih Chan-chun with deputy leader Hsu Ching. It was a relatively inexperienced group; none of them had climbed for more than five years and the experience of the summit trio actually totaled less than five years. An advance party was on the mountain a month ahead of the rest and established Base Camp at 16,800 feet, Camp I at 17,700 feet, Camp II at 19,350 feet and Camp III at 21,000 feet. The climbing party arrived at Rongbuk Monastery on March 19 and advanced up the East Rongbuk Glacier as far as Camp III by March 27. While the main group descended towards Base Camp the next day, Hsu Ching led a party up the 60° to 70° (sic) slopes of the North Col and up a final "narrow ice chimney with a gradient of 70°." The North Col slope was prepared and climbers left Camp III on April 25 to climb as high as 26,000 feet for a final acclimatization. On April 29, they left Camp IV at 23,000 feet and kept on despite a storm the next day to establish Camp V at 25,000 feet on May 1. On May 2 Shi Chan-chun and Hsu Ching with the Tibetans Lhagpatsering and Migmar in ten hours climbed to 26,500 feet. The Tibetans descended to Camp V for food during the night and returned at dawn with Wang Feng-tung, Shi Ching and Gonpa. Their account of the next section is interesting: "At dawn, five of us set out again. We rounded the 'First Step' and climbed a steep rock slope called the 'Yellow Ribbon.' At 8500 metres (27,888 feet) we set up the assault camp (Camp VII). Then with Wang Feng-tung I decided to explore the route to the summit. Before long we came to the famous 'Second Step'—a 30-metre-high rock face which British mountaineers had found insurmountable. We started to climb it and by nine o'clock at night had got to within three metres of the top. We peered at each other in the darkness. It was too dangerous to go on or back. We had neither tent nor sleeping bags and the temperature was about 40° C. below zero. After some search we found a shelf in the snow along the rocky wall, and dug a hole with our ice axes. It was barely large enough to hold us both. We sat in one another's laps, trying to keep warm. There was not much oxygen left in our cylinders, so we decided to turn it off. Next morning as the bright rays of the sun lit up Jolmo Lungma, we emerged from our hole, having made world mountaineering history by

spending a whole night at 8600 metres without artificial oxygen." The whole party was back at Base Camp again by May 13.

Following the supply train, which set out on May 15, the summit party and support team left Base Camp on May 17. On May 23 they reached Camp VII at 27,900 feet. At 9:30 the next morning the summit trio, accompanied also by Liu Lien-man, left camp with 22-pound packs, which included the oxygen gear and ice axes. The Second Step caused them great trouble and took them five hours. Its last ten feet were particularly difficult. Liu Lien-man fell four times as he tried to lead it. Chu Yin-hua even attempted it in bare feet to get better purchase but failed too. He finally made it after three hours of attempts with a *courte échelle*. These efforts had so exhausted Liu Lien-man that slightly higher, already at seven P.M., he found that he could go no farther. In an "open Communist Party meeting" they decided to leave him behind and to continue into the night. At 28,700 feet they had knee-deep snow to wade through. At 28,970 feet, just as their oxygen ran out, they reached the bottom of a cliff. Gonpa led them to the top, which they reached in the dark at 4:20 A.M. They stayed for fifteen minutes on the summit, leaving a Chinese flag and a bust of Mao on the rocks on the northwest side. At dawn they joined their companion who had saved them a little of his oxygen. It is regretted that they published no pictures taken on the upper slopes of the mountain. It must also be emphasized that the account given here is taken entirely from Chinese sources. The details are such that mountaineers in nearly all parts of the climbing world have received the news with considerable skepticism.

Nepal

Indian Expedition to Mount Everest. The principal of the Himalayan Mountaineering Institute, Brigadier Gyan Singh, led an expedition of 13 climbing and 7 non-climbing members to Mount Everest. On May 9 Ang Temba and A. B. Jungalwala established Camp VI on the South Col. Bad weather conditions prevented any attempt higher until May 22. On May 25 Nawang Gombu, Sonam Gyatsho and Narindar Kumar reached a height of 28,300 feet before bad weather forced them to retire. A second party was ready to try to climb to the summit but the oncoming of the monsoon forced the decision to abandon the attack on May 26.

Annapurna II. An expedition organized by the Services of Great Britain, Nepal and India and led by Lieutenant Colonel J. O. M. Roberts made the first ascent of Peak 26,041 feet in the central Nepal Himalaya, commonly known as Annapurna II, in the spring of 1960. The summit was

reached at 4:30 P.M. on May 17 by Captain R. H. Grant, Lieutenant C. J. Bonnington and Lance Corporal Ang Nyima Sherpa of the British Army. Other members were Major G. Lorimer, Captain W. A. Cranshaw and Flight Lieutenant S. Ward, British; Captain Prabakar Shamsher and Lieutenant Gadul Shamsher, Nepalese; and Captains Jagjit Singh and M. A. Soares (Medical Officer), Indian. The route followed was from the north and had already been pioneered by several expeditions to Annapurna IV. (24,630 feet, first ascent by Steinmet's German party in 1955. *A.A.J.*, 1956, 10:2, pp. 140-141.) Camps I to IV were set up at 17,600, 19,000, 21,000 and 22,600 feet respectively. Camp V, at 23,850 feet, marked the farthest limit of exploration towards Annapurna II and it was from here that the summit trio set off on the morning of May 17, using oxygen to traverse the remaining 2½ miles of narrow ridge leading to the foot of the final pyramid. Meanwhile two Sherpas carried forward Camp VI to 23,650 feet (the ridge descends from Camp V) and here the successful trio arrived as night fell after a day probably as arduous as any in the annals of safe and well ordered Himalayan climbing. On May 18 and 19, ascents were made of Annapurna IV. Although sponsored by the Services of Britain, Nepal and India, the great bulk of expedition finances were from civilian and private sources. The expedition arrived back in Kathmandu on June 3.

J. O. M. ROBERTS, *Alpine Club*

Ganesh Himal. The Englishman J. Wallace, accompanied only by two Sherpas, made the second ascent of Ganesh (24,300 feet) on May 31. The first ascent was made by Raymond Lambert, Mme. Claude Kogan and Eric Gauchat in October, 1955.

Pigferago. A light French expedition operated in the Rolwalung Himal, between Gaurisankar and Namche Bazar. The group was led by Robert Sandoz and consisted of Mme. Cécile Barbezat, Alain Barbezat, Pierre Girod, Claude Maillard and Maurice Martin. They abandoned their original objective, Chobutse, because of the dangers from falling ice. They then turned to Pigferago (21,720 feet), which was climbed on October 21 by M. Barbezat and the Sherpa Nawang Dorje by the steep and difficult west ridge. They also climbed three other peaks above the Tolam Bau Glacier, none of these first ascents. These were Pimu (20,830 feet) and Parchamo (20,730 feet), both first ascended in 1955 by Davis and Boultbee, and Singkar (20,630 feet), climbed for the first time in 1952 by Shipton, Evans and Gregory and for the second time in 1955 by Gregory and Courtney.

The 1960-61 Himalayan Scientific and Mountaineering Expedition, Mount Everest and Makalu region, Preliminary Report. This expedition, led by Sir Edmund Hillary, is one of the largest, longest and most diversified ever to enter the Himalayas. Although an attempt will be made to climb Makalu this spring (1961) without using oxygen, the primary objective is scientific research in high altitude physiology, meteorology and glaciology. The twenty-odd expedition members are from New Zealand, England, India, the United States and Australia. There are five journalists or photographers, eleven professional scientists, one radioman, one builder, and seven veterans of one or more Himalayan expeditions. The American members include John Dienhart, public relations director of the sponsor, *World Book Encyclopedia;* Larry Swan, Biologist, Marlin Perkins, director of Chicago's Lincoln Park Zoo; and American Alpine Club members Barry Bishop, Tom Nevison and Leigh Ortenburger. Only a few members will be present for all phases of the nine month expedition.

The first phase was carried out last fall by two separate parties. A group, led by Hillary, conducted an extensive and much publicized snowman hunt in the upper Rolwaling valley. The Ripimu Glacier area was thoroughly explored and several ascents were made of the surrounding peaks (ca. 19,000 feet). Briefly, we do not believe there is a snowman. Numerous sets of "snowman" tracks were photographed only a few miles from Shipton's famous discovery in the Menlung valley. In each case we could follow the man-like prints to a place where they were protected from the sun. Here the prints retained their original round shape, which resembled the paw marks of a small animal such as a fox. For years the evidence of the celebrated Thyangboche "Yeti scalp" has been a strong argument in favor of the existence of a snowman. This has been shown by scientists in this country and in Europe to be not a scalp at all but a bit of goat fur which had been stretched into a pointed shape while still fresh. Likewise the "Yeti fur" brought back by Hillary proved to be the skin of a Tibetan blue bear. Following the snowman search, Hillary's party and over 100 porters crossed the 19,000-foot Tesi Lapcha and joined Norman Hardie's hut building group, located on the southern slopes of Ama Dablam. By the end of November, the expedition had completed a small frame hut at 17,500 feet and a larger prefabricated hut at 18,900 feet. The latter is situated at the edge of a broad snowfield. It is roughly cylindrical in shape, made up of some 100 curved sections consisting of three inches of plastic foam insulation between sheets of thin plywood. The shell of the hut was assembled in just two days. The hut, ten by twenty-two feet, is now fitted with a heating stove, six bunks, electricity provided by a wind generator,

a laboratory section providing unbelievably good working conditions at an altitude of practically 19,000 feet. Just outside the door is a magnificent ski run.

During the fall period, the weather was excellent and a number of members made one or two-week trips exploring valleys and passes of the region. On October 31, Pat Barcham of New Zealand and I made the first ascent of an unnamed peak (20,240 feet), highest in the Chakri Range, a long snow and ice climb of moderate difficulty which started from Chola Col (ca. 18,800 feet). We had made an unsuccessful attempt the previous day along with the Sherpa Annallu. The summit afforded spectacular views of Everest, Lhotse, Makalu, and Cho Oyu. On November 18, Jim Millege of England and a Sherpa made the first ascent of a 21,083-foot peak one-half mile north of the expedition's upper hut. Two earlier attempts to make this extremely long ridge climb with ropes of three had failed for lack of time. Mike Gill of New Zealand and a Sherpa made an ascent of the highest peak of Island Peak (20,305 feet), south of Lhotse Shar. (As the *Journal* goes to press, news comes of the first ascent in March, 1961 of Ama Dablam by Barry Bishop,* the New Zealanders, M. B. Gill and M. Romanes, and the Englishman, Dr. Michael Ward.—*Editor.*)

During the winter, six to eight scientists are spending upwards of three months in the upper hut to study the physiological effects of prolonged exposure to high altitudes, under the direction of Dr. Griffiths Pugh. Six other doctors and one medical student are working on various aspects of high altitude physiology. Barry Bishop is conducting an extensive glaciological and meteorological program. In the spring, the physiologists will continue their studies at 22,000 feet and above on Makalu and, if possible, hope to carry out research on climbers on the summit itself.

THOMAS O. NEVISON, M.D.

India

Chaukhamba, Garhwal. An Indian Air Force expedition under the leadership of Air Commodore S. N. Goyal made the second ascent of Chaukhamba in October of 1959.

* The following was contained in a letter to the editor from Barry Bishop written at Mingbo Base Camp on March 20, 1961. "The climbing news is that four of us climbed Ama Dablam on March 13 after a three-week siege . . . We experienced difficult climbing from 19,500 feet on and used 1400 feet of fixed ropes, 46 pitons, three étriers and 100 feet of wire ladders on overhangs. Four camps were installed, the last at 21,000 feet being an ice cave."

Trisul. The first Jugoslav Himalayan expedition visited the Trisul region of Garhwal. The seven-man group reports that it has made the first ascent of Bethartoli (20,890 feet), on June 5 of Trisul II (21,949 feet) and on June 7 of Trisul III (20,243 feet).

Pakistan

Army Mountaineering Association Expedition, 1959, Chogo Lungma Region, Karakoram. Last summer (1959) our Army Mountaineering Association sponsored an expedition to the Karakoram. The object was to introduce new people to the area and to train them; we were not after any particular peak. We were a large party of sixteen in all, which included three officers from the Pakistan Army (Capt. Jawed Akhter, Capt. Inayat Ullah and Lt. Abdul Ghani) and two from the Royal Navy (Lt. M. B. Thomas and Lt. V. J. Fricker). The rest of us were soldiers (Capt. H. R. A. Streather, leader, Maj. F. L. Jenkins, Maj. P. G. H. Varwell, Capt. A. J. Imrie, Capt. R. G. S. Platts, Capt. T. Hardman, Lt. G. F. Chapman, Lt. D. H. Philpott, Sgt. M. Quinn and Dr. P. J. Horniblow). All went well and we saw a great deal of new territory. In all we climbed six new peaks of between 17,000 and 23,000 feet and visited several new passes. The original plan had been to go to Chitral, but this fell through and so we went up into the area of the Chogo Lungma and Kero Lungma Glaciers to the north of Skardu. Much of the ground we covered on the approach was old K2 ground, and I was particularly glad to be able to employ again many of the porters who had been with us on K2—particularly some of those who had helped to carry us out after the accident. We established our depot camp near Arandu at the foot of the Chogo Lungma Glacier in Baltistan. From June 28 to July 3 we divided into three groups to reconnoitre possible objectives above the Kero Lungma, Alchori and Chogo Lungma Glaciers. A 17,300-foot peak above the Alchori was climbed. The reconnaissance showed that the third glacier was least attractive and so the party split in two on July 8 for climbing on the Hispar Wall above the first two. After the Kero Lungma group had climbed a 17,100-foot mountain, from an advanced base they ascended "Sugar Loaf" (18,500 feet) on July 15, "Wedge Peak" (18,300 feet) two days later and "Engineers Peak" (19,010 feet) the day after. Meanwhile the Alchori party twice climbed "Gloster Peak" (19,300 feet). (These names are unofficial.) In the final phase of the expedition the party again split into two groups, one of which unsuccessfully attempted Ganchen (21,000 feet) but was held up first by a large icefall on the western approach and then by difficulties on the Dongus Glacier. We were more fortunate on Malubiting

and, considering the limited time available to us, met with a certain amount of success. During the first five days we moved up the Chogo Lungma Glacier to establish an Advanced Base near the mouth of the Malubiting Glacier and then Camp I at the foot of Spantik below the southeast ridge of Malubiting. From Camp II, at 20,000 feet, Horniblow and I were able to establish Imrie and Jawed Akhter in Camp II at about 21,000 feet by mid-day of August 1 and leave them there to climb the next day by 12:30 P.M. to the summit of Malubiting East (23,000 feet). They had a fine climb. They were able to move together up to the unstable rock ridge, except where the new snow and *verglas* forced them to move with more caution. They were stopped by a snow wall 200 feet below the summit but managed to bypass this on a very steep snow slope to the left and a small rock tower leading to the summit snow slope.

H. R. A. STREATHER, *Alpine Club*

Disteghil Sar. An Austrian expedition under the leadership of Wolfgang Stefan climbed Disteghil Sar (25,868 feet) in the Hispar Muztagh of the Karakoram. Having left Nagar on May 12, they had ascended the Hispar and Khiang Glaciers and were ready to start reconnaissance on May 24 from Base Camp at something over 14,000 feet. The route attempted up the southwest ridge by the Swiss in 1959 looked too long to them and they preferred the British route of 1957, which winds up the south face. Camp I lay at 18,700 feet. Between there and Camp II at 21,235 feet the route was very nearly cut by a crevasse with a vertical upper wall. Camp III was just off the face on the western ridge at 23,000 feet. Until then, the weather had been nearly perfect, but on the morning of June 9 it appeared to be breaking. Consequently at 10:30 Günther Stärker and Diether Marchart left for the summit. Late in the afternoon they arrived at a little col between two peaks. They chose one but after arriving, noticed that the other was higher and so climbed that one too. They were back in camp, frostbitten, at 9:30 P.M. The storm broke and the climbers with Stefan, who had awaited them in the high camp, had several days of struggle under frightful conditions to reach Base Camp. Other members of the party were Herbert Raditschnig and Gottfried Mayr.

K12. The Saltoro Expedition spent three months in the region at the head of the Saltoro valley, in the eastern Karakoram, during late May, June, July and August. The members were P. J. Stephenson, Australian,

leader, K. J. Miller and D. Haffner, British, J. P. Hurley, American, and R. Sebastian Khan, Pakistani, liaison officer. We left Skardu on May 21 and took eight days to the uppermost village in the Saltoro valley, Goma. From there we followed up the Bilafond valley and glacier to the second major glacial tributary on the east side, opposite Naram, known locally as the Grachmo Lungba. Base Camp was established on June 1, three miles up this glacier at 15,000 feet. This glacier takes a sharp turn beyond this camp, rising close to the west face of K12 (24,503 feet), the exploration of which was our central objective. To try to reach a 19,500-foot pass west of the peak, we climbed the several icefalls on the upper part of the glacier and established two camps at 16,500 and 18,000 feet respectively, but failed initially to find a route through the final icefall, immediately below the pass. After bad weather, we reascended to Camp I to proceed with the plane-table survey. From Camp II a route was finally found through the upper icefall. On June 24, Camp III was set up in the pass. The weather again deteriorated for four days. At the earliest opportunity, a descent was made north from the pass into the extensive snow basin, first seen by Shipton's party in 1957. Two fine days, the only ones experienced, allowed us to survey it both by plane tabling and partially by photo-theodolite. While descending to Base from the pass, Miller was struck on the head by ice and had to return to Skardu. Hurley and I remained on the pass, hoping to reconnoitre the K12 ridge, but bad weather prevented this. We two joined the others at Base on July 4 but the next day reascended and on the 6th reoccupied the camp on the pass. On the 7th we cut a route up the first 1500 feet of the west ridge's steps. Hurley, without previous mountaineering experience, reached 20,500 feet, and after seeing the camp pitched, descended, leaving me the strongest porter, Choo, to continue the reconnaissance next day. We cut up the steep ice and snow buttresses on the ridge to reach the snow apron which covers the upper southwest face. I eventually reached a point on the apron close to 23,000 feet, but though the difficulties of the route had all been overcome, at three P.M. it was necessary to descend to rejoin Choo, who had rested at 22,500 feet with a severe headache. While Hurley left the group on July 12 to return to Skardu, making ethnological studies en route, we other three explored the Chumik Glacier. The glacier proved shorter than suggested by the original survey map, and from the gap reached at its head, we perceived that the country beyond, lying south and east of K12, is completely misrepresented on previous maps. After a return to Goma, Haffner had to leave. Captain Khan and I then spent ten days

exploring and mapping the Gyong Glacier system. Here considerable modifications to the known topography were made and in fact a large blank area existing on the ¼-inch survey maps has been filled in.

P. J. STEPHENSON

Trivor. An Anglo-American expedition under the leadership of Wilfred Noyce made the first ascent of Trivor (25,325 feet) in the Hispar Muztagh. From the Trivor Glacier they reached the col between Trivor and Momhil Sar, where they established Camp III. Three more camps were pushed up the northwest ridge, the highest at about 23,000 feet. From there Noyce and the American Jack Sadler climbed to the summit in 8½ hours on August 17.

Mount Ghent Massif, Kondus Group. The German Institute for Foreign Research in Munich sent on June 29 its third expedition to the Himalayas. I was named leader of the "German-English-Pakistani Himalaya Expedition" (DEPAK). To the team also belonged the Austrian, Ernst Senn, my rope companion on Broad Peak in 1954, and the Rosenthal couple of Selb, Bavaria. Lavinia Rosenthal was to manage Base Camp, while her husband Philip hoped to join us two in climbing a 23,000-foot peak in the Kondus Region of the southern Karakoram. Two weeks after leaving Skardu, on a clear August morning, we left camp on skis at three o'clock and climbed upwards for some three hours on bone-hard snow. At six A.M. we reached the steep north flank of what we thought was Mount Ghent, where we exchanged the skis for crampons. The conditions were in part bad, and after I became tired, Senn had to make all the tracks. I had to rest every 30 paces. About noon we reached a ridge and shortly thereafter a 23,450-foot summit. From there we could see that the highest point of the Mount Ghent massif was separated from us by a deep col and lay farther south. Since I was tired and since we should have to have an intermediate camp on the col, we called it a day with the ascent of our peak, which we called "DEPAK Peak." After a planned and then an unplanned rest day, we started on an attempt on Silver Throne. We climbed for two hours to the southern spur and left all superfluous gear at the foot of the summit slope. The ascent went well at first and we alternated leads. The weather was not yet settled and we were off and on in a "steam laundry." We continued slowly upwards in such thick clouds that we had to keep to the spur. As we advanced, our speed decreased, but finally at about noon we stood on the tiny summit of Silver Throne (ca. 22,640 feet).

MICHAEL ANDERL, *Deutsches Institut für Auslandsforschung*

Afghanistan

Abinger Afghanistan Expedition 1960. Early in 1959 permission was sought from the Afghan Government for an all-women expedition to travel in Wakhan and climb some peaks of the Pamirs from the south. This was refused but an alternative suggestion of climbing in the Hindu Kush was accepted. A plan was therefore made to travel up the Panjshir Valley from Kabul, to attempt the ascent of Mir Samir (19,880 feet) and other peaks of the Hindu Kush, and to return via Nuristan. Because of financial difficulties, the party was reduced to two members, Joyce Dunsheath and Eleanor Baillie, both members of the Ladies Alpine Club. We left England on July 10, and traveled via Leningrad, Moscow, Tbilisi, Teheran, Meshed and Herat to Kabul. On August 2, we made from Teheran an ascent of Demavend (18,600 feet) without guides or porters. Kabul was reached on August 14, where we waited ten days for equipment sent by sea. In the interval, permission was confirmed to climb in the Hindu Kush but refused for travel in Nuristan. The road ended 60 miles from Kabul at the village of Zeneh and donkeys carried the half-ton of baggage on the three-day trek to Kaujan. Here it was possible to substitute horses for donkeys and the following day, August 26, the party of two women, four horsemen, two porters and a soldier, who had been officially attached at Zeneh, set off up the stream which flows down from Mir Samir to join the Panjshir at this point.

A Base Camp was set up after two days march at about 12,700 feet and the horsemen went home, leaving the two unreliable porters to carry higher. From this camp, however, a week was spent as intended in practice climbs including "Twintop" (ca. 15,000 feet); here, as in most cases, summit pinnacles were impossible because of the rotten and crumbling nature of the rock. On September 5, a second camp at about 13,500 feet was set up, and after two nights of good weather, a tent and provisions for five days were carried to a height of 15,000 feet to a camp from which it was hoped to reach the summit of Mir Samir. The next day we made a reconnaissance of a route to the summit by the southwest ridge which appeared to be feasible with one bivouac en route. That night, however, the weather broke. The fall of snow on the unstable rock slope made conditions extremely dangerous and we had to make an immediate descent to the camp below. After a few days the weather cleared but the porters would not go up to 15,000 feet again for they hated the cold, so the attempt on the summit was abandoned. We decided to return to Kaujan and from there to follow the Panjshir to its source and beyond to the Anjuman Pass where

we hoped to get a glimpse of the Pamirs. Fresh horsemen were recruited with considerable difficulty and on September 13, we set off with four horses and men. All the way up the valley there was considerable opposition from the natives because of the danger from Nuristani raiders but by sheer persistence the party eventually reached the Anjuman Pass. A climb of "Schönheit" (approx. 13,500 feet) was made and a height of 15,000 feet gained on another unclimbed, unnamed peak. On September 23, the expedition began the return journey to Kabul, reaching it on September 28.

JOYCE DUNSHEATH, *Ladies Alpine Club*

Berlin Hindu Kush Expedition. On July 17 a heavily loaded Kombi-bus left West Berlin on a four-week trip through southern Europe and Asia for Afghanistan. Wolfgang von Hansemann, Dietrich Hasse, Johannes Winkler and I were off after a year and a half's preparation. From Kabul, the Afghan capital, our caravan, with horses, drovers and a native interpreter, made a ten-day march up the Panjshir-Anjuman valley, deep into the heart of the unexplored Hindu Kush. With unreliable maps which had no altitudes or accurate valley patterns and with information from Harald Biller only about the southern part of the range, which he visited in 1959, our advance was adventuresome and uncertain. In the Dare-Sachi valley, some 20 miles from the Pakistani frontier, we erected our Base Camp at 13,500 feet at the foot of Koh-i-Bandakor (21,850 feet). After establishing three high camps and failing twice to reach the summit, on September 20 we made the first ascent of this peak, the highest which lies entirely within Afghanistan. We also succeeded in penetrating into the main chain of the southern Hindu Kush up the unexplored "Pagar" valley, south from Anjuman, where we made the first ascent of seven peaks between 16,500 and 19,500 feet. We also made meteorological and geological observations and sketch maps.

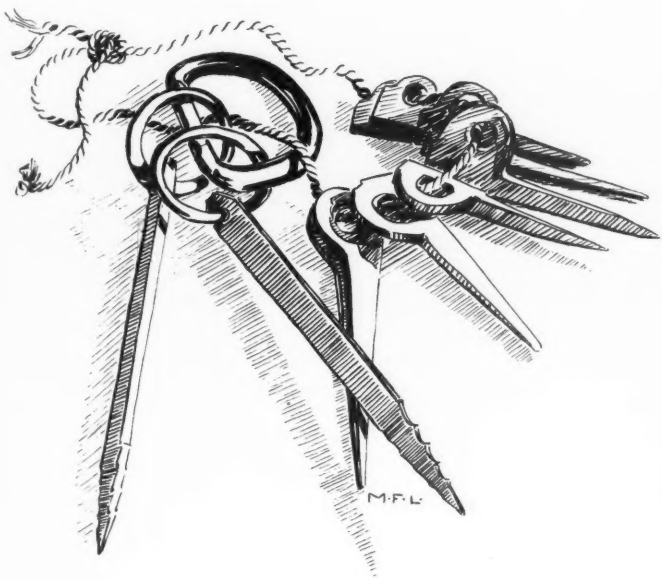
SIEGBERT HEINE, *Deutsche Alpenverein, Sektion Berlin*

Polish Hindu Kush Expedition. This group, under the leadership of Boleslaw Chwaściński, was in the field from July 12 to October 19. They made the second ascent of Noshaq (24,574 feet) on August 27, just ten days after the first ascent made by the Japanese, an account of which appears earlier in this *Journal.* They also made three first ascents in the main chain of the Hindu Kush: Asp-e-Safed (21,326 feet), Roh-e-Daros (19,521 feet) and Horpusz-e-Jach (19,521 feet). Other members of the

expedition were Krzysztof Berbeka, Stanislaw Biel, Jerzy Krajski, Stanislaw Kuliński, Jan Mostowski, Zbigniew Rubinowski, and Stanislaw Zierhoffer.

U.S.S.R.

Pik Lenin, Pamirs. The Russians announce that 200 climbers from Georgia, Latvia, Estonia and Uzbekistan climbed in early August to the summit of Pik Lenin (23,406 feet).



Miscellaneous

ACUTE PULMONARY EDEMA OF HIGH ALTITUDE

A condition which is known medically as acute pulmonary edema appears to occur at high altitudes—and this means to mountaineers—much more often than has been heretofore suspected. Since publication of brief non-medical notes in various mountain journals, and publication of one medical article in *The New England Journal of Medicine* (September 8, 1960), several dozen other cases have been reported to me. Many of these were probably pneumonia or bronchitis or some other infectious disease, but a handful have been classical pulmonary edema. These cases together with some forty others collected from the Andes will form the basis of a comprehensive medical article by Hultgren, Spickard and myself which should be published in the summer or fall of 1961.

The condition appears to occur when an inadequately acclimatized person works too hard at high altitude—usually above 10,000 feet. There is some evidence that it is more common in persons who have been acclimatized, go down to lower altitude, and come up again within a few days or weeks. It can affect any age, and is not dependent upon physical condition. In most of the cases the beginning has been rather abrupt, the course brief, and death has often occurred in forty-eight to ninety-six hours.

The symptoms are rather characteristic: weakness, unusual shortness of breath, tightness in the chest. Cough begins early and is at first irritative, but in a few hours becomes productive, and the patient coughs up large amounts of whitish frothy sputum, often pink tinged. He feels as though he were drowning in his own fluids, he must sit up to breathe, and loud bubbling noises are often heard as he tries to fill his lungs. The pulse is usually, but not always increased in rate, and the temperature often is elevated by a degree or more.

The condition might well be mistaken for pneumonia, especially by non-medical personnel, and it can of course be complicated by pneumonia. Even doctors would be hard put to it to be certain of the diagnosis of pulmonary edema.

Treatment is relatively simple, urgent, and effective. Antibiotics such as penicillin by injection or achromycin (or similar drug) by mouth should be given at once, not only in case this is true pneumonia, but also to prevent pneumonia. Oxygen should be given as soon as possible, by constant flow of 3-4 liters per minute. Pressure breathing—where the subject

breathes out against pursed lips, may be helpful. Injection of a diuretic such as salyrgan may be life saving. Morphine and atropine may be used, but it is not certain as to how valuable these are, for only a few cases have been given these drugs (which are very effective, however, in pulmonary edema due to heart disease).

Digitalis is probably of help but is a dangerous drug unless given by a doctor who understands it thoroughly, and is not recommended for use of non-medical personnel. Tourniquets applied to thighs for five to ten minutes are helpful also, but again should be limited in use to trained medical people.

Descent to a lower altitude should be attempted as soon as is possible. This means getting down several thousand feet with as little effort as possible. If the descent is very difficult, it may not be possible to bring the man down without aggravating the condition, and the party should rely on oxygen and the above measures.

The cause of the condition is not certainly known. We believe it is a disease of function, rather than due to infection, heart trouble or any organic disease. By this I mean that we feel it is due to failure of a normal healthy heart to take care of a load of blood greater than normal. As the heart fails in its job of pumping blood from tissues to lungs and back again, blood backs up in the small vessels of the lung. As blood accumulates in these vessels, pressure increases, and fluid is pressed out into the alveoli or breathing cells of the lung. Pulmonary edema is the result. We do not believe that occurrence of this condition means heart disease or even heart weakness, but further details are still to be explored.

Though I personally have not favored use of oxygen as a climbing aid, no matter what the altitude, I do urge that any party going to a high mountain—say of 15,000 feet or more—should carry medicinal oxygen along. The supply should be enough for one person for several days, and some member of the party should know how to use it, when to give it, and should watch over it.

To summarize: pulmonary edema is a condition in which the lungs fill up with fluid due to accumulation of blood under increased pressure in the capillaries of the lung. The fluid increases and ultimately drowns the victim—unless he is promptly and intelligently treated. The condition usually follows heavy work in an incompletely acclimatized person, and usually happens above 15,000 feet, though several fatal cases have occurred as low as 9000 feet. The symptoms are shortness of breath, weakness, cough, unconsciousness. It is easily mistaken for pneumonia, but is probably not due to infection or to any real disease process. Treatment consists

of antibiotics (in case it is pneumonia), oxygen by mask, diuretics, perhaps morphine, digitalis and tourniquets. Descent to lower altitude should be attempted early and fast.

The condition is probably much more common than suspected, has probably been the true cause of death in many cases called pneumonia, and should be known to all climbers and particularly to medical officers on all mountain trips.

CHARLES S. HOUSTON, M.D., *Aspen Clinic, Aspen, Colorado*

A SURPRISING QUOTATION

"There is an indefinite expectation of seeing something very strange, which however often it may be balked, never fails with me to recur on each successive attempt. Every one must know the feeling of triumph and pride which a grand view from a height communicates to the mind. In these little frequented countries there is also joined to it some vanity that perhaps you are the first man who ever stood on this pinnacle or admired this view." Would you guess the source?—Charles Darwin in *Voyage of the Beagle.*

J. MONROE THORINGTON

A NOTE ON MOUNT OLYMPUS, CASCADES

Following the publication in last year's *A.A.J.* of the early climbing records of Mount Olympus my attention was called by Dr. J. M. Thorington to the fact that in the 1932 and 1940 A. A. C. booklets Belmore Browne had included in his list, "1907: Olympus (first ascent)." This was puzzling, for Belmore would never have claimed anything he had not done; on the other hand his name does not appear in the detailed account by L. A. Nelson in *The Mountaineer,* September, 1907. Recently I had an opportunity to talk with John E. Doerr, Superintendent of Olympic National Park about it. He passed the inquiry on to his assistant, Charles E. Browne (not related to Belmore), who made the following report:

"According to Belmore Browne's article, 'The First Ascent of Mount Olympus,' in *Recreation,* 1908, 28:5, pp. 195-200, his party of five climbed Mount Olympus in the summer of 1907, some days before the party of eleven led by L. A. Nelson. In writing about their return from the climb he mentions this other party. 'In Geyser Valley we met a mountaineering club ascending the Elwha River for an attempt on Olympus. The main party failed on the big mountain owing to unfavorable weather conditions, and at the foot of Humes Glacier a young woman fell and was seriously injured. This shows the necessity of a rope in all serious climbing. When the main party returned, a small number of men remained and succeeded

in climbing Olympus, and also the western peak, which they say is higher than the main mountain. They also transferred our records from the tin can in which we had placed them to a rubber bag.'

"It would seem that the only reason for not considering Browne's climb as a first ascent would be the fact that they climbed Middle Peak which is now known to be slightly lower than West Peak. They described, photographed, and named the West Peak as Olympic Peak; the East Peak was also photographed and titled Mount Brainard. Belmore Browne, Professor H. C. Parker, and Walter G. Clark were members of the Explorers Club; they named a pass in the ridge that separates the Humes Glacier from the Hoh Glacier as Explorers Pass.

"Incidentally, the elevation of Mount Olympus (West Peak) shown as 7954 in Mr. Farquhar's article in the *American Alpine Journal* should be changed to 7976 feet. This new elevation figure (7976) is based on data given us by the U.S.C. & G.S., Department of Commerce."

Happily, Mr. L. A. Nelson is still available for comment, so I sent the correspondence to him at Portland, Oregon, and promptly received a reply under date of March 1, 1961: "The letter from John Doerr forwarding Charles Browne's report is correct, but I will add more data on the way in which The Mountaineers met Belmore Browne and his party and had a very fine visit, but rather meager data from them. Will Humes was packer and guide, brother of Grant Humes, both living on the Humes ranch about 20 miles from Port Angeles, on the Elwha River. Will told me that they climbed the Middle Peak but decided against the West Peak. That settles that point."

So it appears that the first ascent of the West Peak (highest) was made by The Mountaineers, led by L. A. Nelson, August 13, 1907; and the first ascent of the Middle Peak (slightly lower) was made by Browne, Parker, and Clark a few days earlier. As for the East Peak (also lower), two ascents were made by The Mountaineers, August 12 and 15, both led by L. A. Nelson. An old paper was found on the summit of the East Peak, which proved to be from Shelton, Washington, and of a date in August, 1899 (*The Mountaineers,* 1907, 1:3, p. 83).

Mr. Nelson continues: "Later, on inquiry from two men, Mr. Dodson and Mr. Ripon, who were making a map survey and timber type check of the Olympics, they told me their cook, Jack McClone, climbed the East Peak and left a paper on the summit—which clears up the East Peak record." He adds, "It really pays to ask questions of the right people if one wants the answers, and Humes, Dodson, and Ripon had the answers." And I conclude by saying that L. A. Nelson, one of the greatest (and most enduring) of Northwestern mountaineers, also has the answers.

FRANCIS P. FARQUHAR

Club Activities

EDITED BY FREDERICK O. JOHNSON

A.A.C., Cascade Section. The largest outdoor assembly of section members in 1960 occurred on the slopes of Mount McKinley. In May nearly two dozen members passed through the rescue Base Camp that was established to facilitate the evacuation of members of two parties which had both reached the summit and one of which suffered injuries after a fall during the descent.

Climbing activity accelerated during a mid-summer period of excellent weather. Climbers took advantage of the good climbing conditions in the Pacific Northwest by making new routes on Mounts Baring, Index, Adams, Baker, and Rainier, as well as several first ascents. Members also found conditions good on Mount Waddington and Mount McKinley.

The section held five meetings. From 35 to 50 members and guests enjoyed programs on new routes on Mount Rainier, the 1953 Japanese Annapurna IV Expedition, plans for the 1960 American Pakistan Karakoram Expedition to Masherbrum, glacier studies in Washington, and climbs in the Mount McKinley region by the Bremerton, Washington, expedition. The annual dinner on November 18 was attended by 108 people including 42 members. Dick McGowan related the story of the successful ascent of Masherbrum. Arnie Campbell was elected section chairman for 1961.

VICTOR JOSENDAL, *Chairman*

A.A.C., Rocky Mountain Section. A dinner meeting was held on December 9, 1960. Plans for section activities during the coming year were discussed, and two members presented very interesting talks. Gerry Cunningham described his research for the Air Force on cold weather clothing and other problems in the design of mountaineering equipment. Bill Davis showed slides of the Mount St. Elias Range in the Yukon Territory and Alaska with an entertaining account of his climbs in the area.

We have welcomed the presence, as temporary residents of our area, of Al Baxter, Dick Irvin, and Bob Swift. Irvin and Swift have been members of the Academic Year Institute at the University of Colorado and have been generous with their time in giving programs for the benefit of the

Rocky Mountain Rescue Group. We had a brief visit from Dr. Tom Hornbein shortly after his return from the successful Masherbrum Expedition.

HAROLD F. WALTON, *Chairman*

A.A.C., Sierra Nevada Section. Section members climbed in many parts of the world during 1960. In Africa Jack Graham climbed the two summits of both Kilimanjaro and Kenya and the peaks over 16,000 feet in the Ruwenzori; and Al Baxter led a successful Sierra Club party of 17 to the Ruwenzori in the summer. Henry Kendall led an expedition to the Cordillera Blanca of Peru. Tom McCormack was a member of the successful Masherbrum Expedition. Leigh Ortenburger climbed extensively in the Tetons, where he established new routes on Mount Moran, the Grand Teton, and Thor Peak. Barbara Lilley visited the Purcells in Canada, climbing Mount Findlay and making five first ascents in the area. Steve Jervis managed to do some climbing in Europe in spite of exceptionally bad weather, and Don Woods was active in the Pyrenees and the French Alps.

Two meetings of the Sierra Nevada Section were held during the year. On January 8 at the home of Francis and Marge Farquhar, Leigh Ortenburger presented the movie and slides of the 1959 American Andean Expedition which were taken by David Dingman and Kermith Ross. In addition the Farquhars gave an entertaining account of their safari in Africa. At the home of Fred Johnson on May 21 Craig Merrihue presented slides of the northwest arête of Mount Robson, and Jules Eichorn gave an account of his climb on Mount Logan with Bill Hackett's party in 1959 which succeeded in making the first ascent of the north peak and the fourth ascents of the central and west peaks of the mountain.

LEIGH ORTENBURGER, *Secretary*

Alaska Alpine Club. The 1960 climbing season began in February with a three-man party reaching the summit of Institute Peak (8000 feet) in the Alaska Range. In April, 20 people participated in a Castner Glacier trip, with eight climbers making the second ascent of the White Princess by a route from the north. In late May a three-man party attempted an unclimbed 11,500-foot peak about 20 miles up the Black Rapids Glacier in the Alaska Range, but was turned back by white-out conditions after trying several approaches to the east ridge. During the summer members were again active in the Black Rapids Glacier area and also the region around the Susitna Glacier. A five-man party made first ascents of Peaks 10,065 and 8574; bad snow conditions prevented additional first ascents of several 10,000-foot peaks in the area including Peak 12,360. In October a glacier climbing school was held on the Gulkana Glacier.

A group began compiling for future publication information concerning the altitudes, locations, and pertinent information about Alaskan mountains. The group at Box 224, College, Alaska, would appreciate receiving data on Alaskan ascents so that its information may be as accurate as possible.

Officers for 1960 were Gene Wescott, President; George Oetzel, Vice-President; Teri Viereck, Secretary-Treasurer; and Neil Davis and Pete Isto, Advisors.

GENE WESCOTT, *President*

Alpine Club of Canada. The 1960 ski camp was held at Berg Lake near Mount Robson during the Easter holidays, April 15-28. Ski conditions on the way to Berg Lake were not of the best owing to the late date of the camp. However, everyone had an enjoyable time.

The annual summer camp was held at Fryatt Creek in Jasper National Park July 17-30 with 130 people attending. The trail to camp was very beautiful and comparatively easy despite the last mile and a half of rough creek bed. The original plan to cross the Athabasca River by boat had to be abandoned owing to high water, and it was necessary to drive in the three miles on the Geraldine Lake road near Athabasca Falls and then hike approximately 11 miles. The weather during camp was well-nigh perfect except for a shower or two on the weekend of the annual meeting. Ascents were made of Brussels, Christie, Fryatt, Olympus, Belanger, Parnassus, Lowell, and The Three Blind Mice as well as a number of trips made to the lakes and meadows adjoining camp.

The Canadian Icefields Expedition under Hans Gmoser's leadership attempted to establish a Haute Ski Route along the crest of the Rockies, a route comparable to the existing Alpine High Level Route from Zermatt to Chamonix in the Alps. This was tried in the spring, but was not too successful because of the adverse weather conditions.

W. C. LEDINGHAM, *Secretary-Treasurer*

Appalachian Mountain Club. During 1960 the Appalachian Mountain Club, through its many members, participated once again in expeditions to almost all mountain ranges of the world, with greatest emphasis, as usual, in North America.

The club issued its revised White Mountain Guide as well as its usual publications including *Appalachia.* All of the heretofore existing club programs continued with participation of AMC members.

Of highest importance in the club's estimation is the program of Mountain Leadership, which is probably unique among all mountaineering organizations in that it seeks to provide education to the public through leadership training programs, the Leadership Certification program, and the annual Safety Poster. The AMC makes available to all other mountaineering organizations the material developed under this program. The club has recently undertaken the preparation of spot announcements for radio and television in order to increase the public's awareness of the danger of inadequate preparation for a "mountain holiday."

WILLIAM L. PUTNAM, *Corresponding Secretary*

Chicago Mountaineering Club. 1960 was the twentieth year of the club's operation; the organization now has 158 members with 50 qualified rope leaders. The year's activities once again consisted of training and rock-climbing week-ends throughout the year at Devils Lake State Park, Wisconsin; Mississippi Palisades State Park near Savanna, Illinois; and two winter outings at Starved Rock State Park, Illinois. The club had no serious accidents this year.

The highlight of the club's activity was the purchase of land for its own campground near Devils Lake, Wisconsin. This was necessitated by the overwhelmingly large crowds in the state park campground. The ownership of our own campground close to the finest rock for climbing in the Midwest, gives us many advantages over the former camping facilities. With 95 acres of wilderness-like surroundings, the club offers the use of its campground to any mountaineering organization.

The club did not sponsor a western outing this year; however, many members climbed in the Tetons and the Rockies of the western states and Canada. Several members joined the Iowa Mountaineers in the Idaho Sawtooths and also participated on their Alaska trip. Other summer activities included Frances Mullen's trip to the Salzkammergut of Austria and the Piz Bernina; Don and Gwen Simpson climbed in the Pyrenees and the Swiss and Italian Alps; Lothar Kolbig climbed in Africa; Lucio and Vittoria Mondolfo, Barbara Palser and Ed Porter attended the ACC camp; Ernst Kuncl taught rock climbing at a boys' summer camp in Colorado and made several ascents of the east face of Longs Peak; and Herb Keishold led a group up Devils Tower and the Durrance Ridge of Symmetry Spire in Wyoming.

The 1961 biennial western outing will be held in Glacier, British Columbia, in the early part of August.

GEORGE POKORNY, *Outing Chairman*

Colorado Mountain Club. Seventy-six people attended the annual two-week outing, July 17-30, in the Needle Mountains of southwestern Colorado. Fourteen peaks were climbed including Eolus, Windom, and Sunlight, the area's three 14,000-foot summits; and also the 13,000-foot peaks of Pigeon, Turret, Jagged, Animas, Monitor, and Heisspitz. A variety of other shorter trips rounded out an active year, during which 30 of the state's 14,000-foot peaks were ascended on scheduled climbs.

Included among a number of social events and lectures were three fine illustrated programs; by Dick Irvin on the 1956 British-American Karakoram Expedition's attempt to climb Rakaposhi; by William Buckingham on last year's first ascent of the western rim of Mount McKinley's south face; and by Hans Gmoser, who presented his colored film, "Vagabonds of the Mountains."

The Denver Group of the club has revised its classification of climbs, and the revision appeared in the September 1960 issue of *Trail and Timberline.* The same issue carried an account of the spectacular ascent of the Diamond on the east face of Longs Peak.

The climbing schools were active in the spring with 134 people enrolled from the Denver Group and 50 others from the Boulder and Pikes Peak Groups. In November the Boulder Group held its second annual avalanche school with over 90 mountaineers attending. A detailed article on avalanches and the results of the 1959 avalanche school appeared in the February, 1960 issue of *Trail and Timberline.* Reprints were used as texts for the 1960 CMC climbing school and the avalanche course, which Fred C. Tuttle of the National Ski Patrol's Central Division conducted.

LESTER A. MICHEL, *President*

Dartmouth Mountaineering Club. It seems to be the opinion of many Eastern climbers, and almost the general consensus among those in the West, that the only creditable climbing in the East exists either in the 'Gunks or at Seneca Rock. For those who share in this feeling, we should like them to join one of our week-end climbs either during the spring or fall. Often overlooked are such well-established climbing areas as Smuggler's Notch, Whitehorse and Cathedral Ledges, Huntington Ravine, and Franconia and Crawford Notches. There are also many smaller cliffs and faces throughout the White Mountains; the rock is solid as well as difficult, and the climbs vary from one to as many as 10 leads. Several of these areas which the DMC visits regularly are Rattlesnake Mountain, Orford, Eagle Ledges, and Owl's Head near Warren, New Hampshire. The latter climb presents a broad, open face some 800 feet high in places and about a

quarter of a mile long. The climbing varies from a 35° friction pitch some 120 feet long to nearly vertical jam-cracks, long laybacks, slab climbing, tension work, and an endless variety of routes and variations. Several of the routes are standard and well marked, while several of us are at work on a bolt-and-tension route of some seven or eight leads that may challenge any in the East.

Such classic areas as Poke-O-Moonshine, Mount King, and the Condor Pinnacle in the Laurentians of Canada provide some of the most challenging climbing in the country. We have also uncovered there a series of ledges several hundred feet high and nearly a mile long that very closely resemble the rock formation of both Seneca and the 'Gunks. Though only barely investigated, these cliffs could prove as promising as the 'Gunks have been.

The usual large contingent of Dartmouth climbers spent at least part of the summer in the Tetons. Former members Corbet, Breitenbach, French, and Neale served as Exum guides, and Pete Sinclair was one of the climbing rangers. Our members also climbed in the Colorado Rockies, the Mount Hood area, British Columbia, and the Lake Louise area. Tom Marshall was our sole representative in Europe, where he climbed in the Swiss and Austrian Alps.

The next edition of the DMC journal will be published for the years 1961-1962. In order to maintain the journal's quality, we feel it is necessary to limit its publication to every other year. In the intervening years we plan to send out a newsletter to inform members, friends, alumni, and other climbing clubs of our activities and plans.

FREDERICK W. MEDRICK, *President*

Harvard Mountaineering Club. Last summer being an interim season between the biennial climbing camps of the Harvard Mountaineering Club, climbing by members was carried out independently. Nevertheless, activity was by no means diminished. In Europe, several members made the most of what good weather they could find: Bob Page and Steve Jervis, Dennis Dunn, Hank Abrons, Leif Patterson, and Earle Whipple climbed in the Alps. Christopher Goetze toured the northern Wind Rivers, where he made seven first ascents, gained one "first" in the Needles of the San Juan Range in Colorado, and climbed in the Teton and Sangre de Cristo Ranges. In August, Mike Wortis, Bob Conrod, Gino Segré, and Lenny Clarke ascended the east face of Longs Peak. Further west, George and Richard Millikan climbed in the Wallowa Mountains of eastern Oregon. In the Sierras, Gordon Benner led a Sierra Club High Trip into Yosemite.

Mount Robson repelled Craig Merrihue, Bill Hooker, and Gil Roberts; they turned back about 100 feet below the summit in their attempt on the Cain Route. For the unfortunates who did not find their way to larger mountains, the Shawangunks, Katahdin, and the White Mountains provided satisfaction. Proving once again that New Hampshire climbing still challenges, Earl Whipple put up a new route on White Horse Ledge.

The HMC has continued its programs of instruction in climbing, first aid, and rescue techniques. Rock climbing during the college year included local quarries, the Shawangunks, the Whitney-Gilman route, White Horse Ledge, and the Pinnacle in New Hampshire. Spring of 1960 saw ice climbing on Mount Washington, including ascents of the Pinnacle Gully.

ALAN F. NAGEL

Iowa Mountaineers. During the past year there was an increasing indication that the club is changing from a university and Iowa organization to one with a majority of its members living in other states, especially Minnesota, Wisconsin, Illinois, Missouri, Nebraska, and South Dakota. At present members reside in 40 of the country's 50 states. Sixty per cent of the 1960 summer outing participants were from states other than Iowa. A higher percentage of the membership is also doing independent climbing in the great mountain ranges of the world or participating in major expeditions.

During 1960 the club sponsored 18 instructional week-end climbing outings to areas in Iowa, Illinois, and Wisconsin with an average attendance of 32 people per trip. Ten dinner hikes were offered, and 17 color adventure film lectures were sponsored with attendance averaging around 500 people at each lecture. The club sponsored a Mountaineers Explorer Scout Troop to train young climbers from the Iowa City area. One hundred and ten persons from seven states attended the annual banquet in April.

There were two summer outings. Seventy-six members attended the Sawtooth Camp in Idaho on the southwest shore of Big Redfish Lake. Whitney Borland, Hans Heuer, Wally Joura, Bill Echo, Felix Hagerman, Rod Harris, and Hans Gmoser served as climbing leaders. Peaks climbed included Grand Mogul, Elephant Perch, Eagle Perch, Chockstone Peak, Redfish Peak, Cramer Peak, Warbonnet, Flatrock Needle, Quartzite Point, Black Aiguille, and Heyburn.

Sixteen members participated in the club's third Alaskan expedition led by John Ebert. The objective was to explore the climbing possibilities available from the highways in Yukon Territory and Alaska so that future outings may be planned to specific areas. One major peak was climbed in

the Rainbow Mountains of the Eastern Alaska Range. The group visited Mount McKinley Park; the Black Rapids, Castner Glacier, and Gulkana Glacier regions; and the Valdez and Portage Glacier sections near the coast. All the major highways were traversed, and a number of attractive peaks were located along the Alaska Highway in the Yukon.

The 1961 camps will be held in the Black Hills, Needles and Devils Tower region on the South Dakota-Wyoming border August 14-25, and an expedition will travel to the Cordillera Blanca in Peru starting July 2.

JOHN EBERT, *Outing Director*

Mazamas. One of the year's biggest projects was the rebuilding of Mazama Lodge on the south slopes of Mount Hood. The new lodge was dedicated June 25; the event was followed the next day with an ascent of Mount Hood by some 175 people. The new lodge will aid the club in continuing its summer program of "acquaintance" climbs on Mount Hood for the general public, as well as in supporting the winter activities of club members.

The large climbing school program was continued, and to it was added a section on Instruction and Leadership. The school's intermediate section was refined and concentrated on the goal of advanced instruction for dedicated mountain enthusiasts and prospective leaders. The school continues to fulfill a public need for instruction in safe mountaineering and to furnish the club with new members.

The unique Mazama Youth Activities group continues to win support from all those connected or familiar with its purposes. From this group will emerge the future climbers, conservationists, and outdoor enthusiasts.

Weather in the Northwest favored the summer climbing program, and a record number of peaks were ascended. The outings at Maligne Lake and in the Wind Rivers were both successful. Two Mazamas were members of the attempt on K2 in the Karakoram, Dave Bohn and Bill Hackett. Two others, Allison Logan and Marge Dauelsberg, spent the summer traveling the high country of Peru, where they crossed paths with the perennial Peruvian traveler, Fred Ayres.

TOM GIBBONS, *Climbing Committee*

Wisconsin Hoofer Mountaineers. Sunday climbing at Devils Lake during the academic year continues to be the mainstay of our rock climbing activities, although occasional overnights, hikes, and an outing to the Mississippi Palisades were programed. Because of an unusually large new membership in the fall accompanied by extremely good weather, improved

facilities were incorporated for teaching dynamic belaying to the newcomers.

In August one group climbed in the Tetons, ascended Oregon's Middle Sister, and in Glacier Park, British Columbia, climbed Mount Sir Donald by the north ridge. A second group climbed for two weeks in the Fremont Peak area of the Wind Rivers and also visited the Tetons.

MICHAEL PETRILAK, JR., *Chairman*

The Mountaineers. During 1960 club membership grew to about 4100 people, with an accompanying sizable increase in mountaineering activities. In Seattle 427 persons registered for the Basic and Intermediate Climbing Courses, with the Everett and Tacoma sections raising the total number of registrants to well above 500. In addition to the course's lectures and practice and experience climbs, the climbing committee sponsored more difficult climbs for small, qualified parties; seminars, including one on ice climbing; a series of one-day climbs; and a two-week outing in the Coast Range of British Columbia. After flying in and using air-dropped supplies, the group split into two parties. One party climbed Mount Jeffrey, Mount Tellot, Mount Williams, First and Second Claw Peaks, and Tellot Spire. The second party succeeded in ascending Mount Waddington, the principal peak in the area, as well as Tellot Spire, Upper Claw Peak, and Mount S.

The Viewfinder group conducted nine snowshoe trips and 26 climbs on non-technical routes not requiring ropes. They also presented a hiking course, including ice-axe practice, for 46 newer club members. Twenty-nine hikes were scheduled by the Trailtrips group, and the Campcrafters held week-end family outings and their annual Gypsy Tour around the Olympics. Some 60 people spent the two-week summer outing crossing the Olympics from east to west. The ski touring program suffered somewhat from a light snow cover, but several ascents of peaks were made.

In April 5000 copies of the new book, *Mountaineering, The Freedom of the Hills,* came off the press. This climbing text culminates a vast cooperative effort among club climbers who devoted the benefits of their mountain experience and volunteer labor in publishing and selling this book.

The Safety Committee issued forms on which climbers are encouraged to report hazards, accidents, or near-accidents encountered on climbs. The close calls all too often do not receive the attention they deserve because human injury or death is not involved; yet only luck separates these incidents from tragic accidents in most cases.

A glissading accident on Guye Peak resulted in serious injury to a

member when he lost control and slid over a cliff. On a private climb a Mountaineer on Mount Thompson was killed by a large rock dislodged by a companion. Three Mountaineers were involved in an accident on Mount McKinley, and dozens of club members active in mountain rescue operations were flown to Alaska to aid in their rescue.

WARD IRWIN

Sierra Club. In addition to the important conservation activity of the Sierra Club, climbing proceeded as usual. This year the numerous regular summer outings reached as far as Africa, where Al Baxter led a successful trip to the Ruwenzori. Besides this ambitious trip, the other club outings produced several ascents of interest and many climbs of the old standbys in the Western mountain areas.

Private climbing trips, as always, completed the largest number of difficult climbs. Included among these were numerous spectacular rock ascents in Yosemite valley, several of which required a number of days to complete.

A renewed interest in winter ascents seems apparent as the highest Sierra summits are being attempted in January and February. The winter weather and heavy snowfall usually provide a rugged challenge. One problem that has always remained, however, is: when does the "winter" season begin or end? Conditions vary from year to year, and the calendar is not often the criterion of who made the first winter ascent. This is undoubtedly one of the questions that can best be argued in one's tent during a High Sierra blizzard in November.

RICHARD C. HOUSTON, *Chairman, Mountaineering Committee*

Stanford Alpine Club. The Stanford Alpine Club continues to sponsor a program of weekly practice climbs to local outcroppings supplemented by week-end expeditions to Yosemite valley and other areas for more serious climbing. The program is designed primarily to train beginners in safe and proper techniques, but also offers the experienced climber a chance to participate in enjoyable climbing as well as to test his ability on more strenuous climbs.

Beginners must show a certain degree of skill in rope techniques, a knowledge of safe practices, and reasonable judgment to be qualified to climb on week-end expeditions. Qualified members who have gained the requisite amount of experience and shown ability and sound judgment on club trips may be advanced to the rank of rope leader or trip leader at the discretion of the present leaders.

Club expeditions have been limited to rock climbing this year. Trips

have been made to Tuolumne Meadows, Pinnacles National Monument, and several to Yosemite valley. Unfortunately the only planned ice and snow climb, a mass assault on Mount Shasta over Thanksgiving which was successfully completed in 1959, had to be cancelled this year when an early snowfall made the area inaccessible in the time allotted.

Though the club has sponsored no major expeditions of its own, members have been active independently. Henry Kendall used his previous experience in the Andes to help organize the 1960 North American Andean Expedition on which he was accompanied by Carl Heller, Ernst Bauer, John Lamont, and Dave Brown. Early in the fall Stanford climbers Leigh and Irene Ortenburger and Henry Kendall teamed with Royal Robbins to make a fine ascent of the Lost Arrow in Yosemite valley. The descent from the pinnacle was accomplished by a spectacular 150-foot Tyrolean traverse to the valley rim over 1500 feet of exposure, saving many hours of tiresome rope work. This was only the second time that this method of descent had been used, the first such descent also having been completed by Stanford climbers.

Early in 1961 Leigh and Irene Ortenburger went to the Himalayas to join Sir Edmund Hillary in his search for the Yeti and to attempt to climb Makalu without oxygen.

PETER MELZ, *President*

Book Reviews

Mountaineering—The Freedom of the Hills, by the Climbing Committee of The Mountaineers; Harvey Manning, Chairman of Editors; Editorial Committee: Nancy Bickford (Miller), John R. Hazle, Carl Henrikson, Thomas Miller, Franz Mohling, Rowland Tabor, Leslie Stark Tabor. Seattle: The Mountaineers, 1960. 430 pages; 16 photographs; 134 sketches. Price $7.50.

This is an excellent book. One can tell that it is written by mountaineers who love the mountains. This feeling runs throughout the book and can be sensed even when meticulous details are described. Essentially a manual of instruction and of techniques, it will be useful to all, although specifically tailored to the Mountaineers' climbing course. Its size and weight preclude its use as a handbook in the rucksack but its scope recommends careful study at home. The wide variety of points covered is shown by the chapter headings. These follow: "Equipment," "Camping and Sleeping," "Alpine Cuisine," "Wilderness Travel," "Navigation in the Hills," "Routefinding on Rock," "Balance," "Counterforce," "Roped Climbing," "Belaying," "Pitoncraft and Rappels," "Snow," "Ice," "Glaciers," "Arrests and Belays," "The Climbing Party and its Leadership," "Climbing Dangers," "First Aid," "Alpine Rescue," "Mountain Geology," "The Cycle of Snow," "Mountain Weather." The technical parts are clear and understandable and so are the reports on equipment and clothing. Here, by necessity, some of the latest additions are not included since it is impossible to keep up with all new items appearing every season. The numerous drawings and sketches are clear and will be of great help, especially to the beginner. The photographs are beautiful. *Mountaineering—The Freedom of the Hills* is highly recommended for beginners and will be read to advantage and with pleasure by all who love the hills.

HANS KRAUS

Der dritte Pol, by G. O. Dyhrenfurth. Munich: Nymphenburger Verlag, 1960. 263 pages, 35 ills., 16 maps, 4 sketches, 6 profiles. Price D.M. 28.

To be placed beside the standard Himalayan series edited by Marcel Kurz is the reedition of Professor Dyhrenfurth's *Zum dritten Pol* (1952), in which the author compiled the historic events of climbing attempts and successes up to that time. In the new edition he covers the Himalayan

decade 1950-1960, during which, for the first time, 8000-meter peaks were gained. The author evaluates success on Annapurna I, in 1950, as equal to the attainment of the Poles. The narrative continues to Dhaulagiri in 1960. There is also a chronological chapter in which the ascended 7000-meter peaks of the world are included. With Professor Dyhrenfurth's immense personal experience (leader of two Himalayan expeditions during which the first ascents were made of four 7000-meter and five 6000-meter peaks), it is not surprising that we are offered the best documented book of its kind. This applies equally to the well-chosen illustrations, maps, route sketches and geologic profiles. A rich bibliography concludes an outstanding work.

J. MONROE THORINGTON

From Everest to the South Pole, by George Lowe. New York: St. Martin's Press, 1961. viii + 216 pages, with 6 maps and plans; 32 pages of photographs. Price $4.50. First published in England under the title *Because It Is There.* London: Cassell and Co., 1959. Price 21s.

George Lowe climbed high on Everest in 1953 and crossed the Antarctic in 1957-58; he has a lot to tell. Many American mountaineers who heard him talk about Everest, when he came to this country with Hillary and Evans in 1954, will turn to his book eagerly, remembering the clarity and good humor of his discourse. Their first reaction may be disappointment, for Lowe's account of climbing days runs to only fifty pages. There are passing references to the New Zealand Garhwal Expedition of 1951, the Cho Oyu Expedition of 1952, and the New Zealand Barun Expedition of 1954; there is a chapter, "Easy Day for a Lady," on Everest. Most of the book has to do with the Commonwealth Trans-Antarctic Expedition led by Sir Vivian Fuchs. Under the circumstances, the American title for the book seems much more appropriate than the English.

No doubt the author wanted to avoid repetitiousness. Hillary, Tenzing, Evans, and Noyce had already amplified the story told by Sir John Hunt in *The Ascent of Everest.* No one, so far as I know, had provided sidelights on *The Crossing of Antarctica.* Anyhow, a thought along this line relieves initial disappointment and enables the reader to enjoy the many passages of sharply observed detail, rendered with simple straightforwardness—sometimes, indeed, with unusual frankness. In a chapter entitled "Three Leaders," Lowe compares Hunt, Hillary, and Fuchs. Lowe's photographs, as we know, are very good; his verbal portraits of Hunt and Fuchs are even more interesting and memorable.

DAVID A. ROBERTSON, JR.

Mount Everest, by Toni Hagen, G. O. Dyhrenfurth, Christoph von Fürer-Haimendorf and Erwin Schneider. Zürich: Orell Füssli, 1959. 234 pages; 31 photographs, 25 figures and a relief map, scale 1:25,000. Price 24 Swiss Francs.

This book is in four parts, each written by a renowned authority in his field. Dr. Toni Hagen, author of the section "Vom Werden des höchsten Gebirges der Erde" (The Formation of the Highest Mountain Range on the Earth), traveled for eight years (1950-58) through the valleys and over the high passes of Nepal, covering in all about 10,000 miles on foot. He was working as a geological expert for the United Nations Technical Assistance Administration and the Nepalese government and collected during this time more evidence appertaining to the geological history of the Himalayas than any other single geologist before him. In the first 125 pages of this book Toni Hagen gives an absorbing preliminary account of this highly interesting, little known section of the earth's geology. The material here set down, though written for the layman, is valuable to the professional both in itself and as an introduction to the forthcoming scientific publications by the same author.

In the second section, Dr. G. O. Dyhrenfurth, himself a pioneer of mountaineering and scientific work in the Himalayas and leader of two international expeditions, contributes a detailed history of all expeditions to the Everest group between 1921 and 1958. The concentrated factual information is presented in such a lucid and interesting manner that it is a pleasure to read this most welcome and instructive summary of the climbing efforts at this "Third Pole."

In his account of the life, culture and origin of "The Sherpas in the Khumbu Area," Professor Christoph von Fürer-Haimendorf, ethnologist at the school of Oriental and African Studies, University of London, presents the material he gathered during two long visits when he lived amongst this most amiable population at the foot of Mount Everest. His contribution deserves the highest recommendation, for every sentence provides facts which are of both scientific and general interest. Every word holds as much value for those who have been in this area as for people who are simply interested in mountainous regions and their inhabitants. The reviewer was pleased to find the resemblance which he had noted between the Sherpas and other mountain populations, for example the Swiss mountain villagers, upheld by these thorough, scientific investigations.

Erwin Schneider, the Austrian topographer and surveyor, describes in the last part of the book how he compiled his superb contour-line map of the Mount Everest area. Only Schneider with his unique experience and

rare intuition in map making by means of terrestrial photogrammetry could have amassed all the material necessary for this first complete map of the Chomolungma-Mount Everest massif. Though there are some errors, such as placing Chukhung village on the wrong side of the river (in spite of my sketches showing the correct location! cf. p. 228), and though the treatment of detail in some parts is too generalized, Schneider's map is a masterpiece of cartography and is of enormous value for both scientists and mountaineers.

This comprehensive account of the earth's highest region succeeds outstandingly in presenting scientific information in a highly readable and understandable style. It is illustrated with beautiful photographs and excellent diagrams and is further enhanced by the inclusion of the relief map.

FRITZ MÜLLER

The Red Snows, by Sir John Hunt and Christopher Brasher. London: Hutchinson and Co., Ltd., 1960. 176 pages, ill. Price 25 s.

Here is a book which should be read by everyone interested in visiting the Caucasus for serious mountaineering. The principal author is Christopher Brasher, who made a new Olympic record for the 3000 meter steeplechase at Melbourne in 1956. Sir John Hunt was invited to join the party of eight young British climbers which included George Band and Mike Harris, and who called themselves the British Caucasus Expedition 1958. The author says: "It took us five years of frustration, correspondence, mounting files, before we finally got to Russia. But when we had surmounted bureaucracy we found it was worth every hour, every letter, every disappointment. We climbed with Russians; we lived with Russians, we found that we thought alike about common interests." This is the key to the book, the first one in English on present-day climbing of the highest standard by visitors with the Russians in their chief relatively accessible high mountain area.

Climbing in the Soviet Union is highly organized. All mountaineers are rated as 1st Class, 2nd or 3rd Class, a few are Masters of Sport, and a handful are Honored Masters of Sport. Thousands participate. The Russians have great courage and endurance. They think nothing of carrying heavy packs and spending days at a time on the highest peaks, traversing back and forth and along the various groups of peaks which in the Bezingi Glacier area of the Caucasus rise up to 17,000 feet. The ten-mile long glacier tongue ends at about 6500 feet. The climbing camps are run by different unions which provide most of the funds. The British party, after flying down from Moscow to Rostov and then to Mineralnye-Vody,

went by bus to the Baksan valley, which heads between the western end of the main range and Elbruz. Spartak Camp, open all the year, is up the Adyl-su valley, above its junction with the Baksan. Arriving in the rain, they were greeted by a large placard, "Welcome to the English Alpinists." Supper followed with some of the instructors. Camp was called the next morning by loud speakers, and all the Russians did exercises before breakfast. Eugene Gippenreiter came to take charge of the party's arrangements.

They climbed in two areas, the first around Ushba. On the way up to high camp the strange red snow was seen, something reported by Freshfield many years ago, and caused by bacteria which become encased in falling snow, giving the surface an appearance of being thinly covered with dried blood. The attempt on Ushba, a very bold twin-peaked summit of 15,400 feet, never got much above the high camps into which the party divided. Snow fell much of the time for a week. Returning to Spartak Camp, a truck was taken down to Nalchik, and then up into the Bezingi valley. The next chapter is headed: "The most exciting area of mountains in Europe." The Caucasus crest is the dividing line between Europe and Asia, thus Elbruz is the highest peak in Europe and the Bezingi valley on the north slope is also in Europe, but Svanetia fifteen miles across the range is in Asia. Arriving at New Bezingi village, camp was made near a camp of the Academy of Sciences. The scene ahead was almost Himalayan in scale and splendor; the Bezingi Wall, five miles long and thousands of feet high. The party was divided into three groups: the first composed by Band, Harris, Bull and Kustovski would attempt the Müller Buttress on Shkhara, a climb of 5A standard. The second consisting of Hunt, Blackshaw, Jones and Brasher would try the Schwarzgruber Rib on Jangi-tau. The third group of Neill, Thomas, and Gippenreiter would attempt Gestola by its face. Enough to say that the description of those climbs on glacier, rock, snow and ice among crevasses, nights at high altitudes, is dramatic indeed. There were minor mishaps as when an ice axe pulled out, dropping Hunt into a crevasse. Between climbs, groups of Russian climbers would come over to the British camp or vice versa, and listen to each other's accounts of the climbs; the Russians particularly enjoyed listening to John Hunt. One of the best climbs was a joint one on Shkhara, up by a rib on the 7000-foot face and down by a curving ridge and ice fall to the starting point. Also, one by a new route on Dykh-tau led by George Band.

As would be expected in such mountains, there is an occasional fatal accident. Two occurred in the vicinity during the British visit. A dozen people had been killed in the Caucasus the previous year, a remarkably

good record for the amount of climbing done in such a great region. Rescue work is well organized. The leader, a Master of Sport, whether held to blame or not, is sometimes demoted for a year or two, but then may be restored to full privileges later, which includes authority to plan and lead expeditions.

Toward the end of the book is a chapter on the question as to whether the reports of a Russian attempt on Mount Everest in the fall of 1952 were based on fact. The source of the story, if it was only that, seems to be blamed on a defector from East Germany who, being short of money and knowing something of Russian climbing, had given a good story to the Press. The Russians also appeared to be planning a joint effort with the Chinese: a reconnaissance in 1959, and the actual attempt in 1960. (The Chinese did claim a success in May, 1960.)

John Hunt summarizes climbing in the Caucasus by comparing it with something between the Alps and the Himalayas. "The standards of the climbs," he says, "were as hard as some of the really difficult Alpine ones; but longer and lacking the amenities," huts, paths, etc. The times of most of the Russian parties are slower than, for example, that of Mummery and his guide Zurfluh who first climbed Dykh-tau, up and down in eleven hours, instead of the two or three days as often taken today, but probably with less expert parties. He writes very appreciatively of some of their Russian climbing companions, in particular Anatoli Kustovski and Eugene Gippenreiter. Ending the book is a valuable chapter on "The Mountaineering History of the Caucasus" by John Neill.

This book is good reading, and is well illustrated. It gives probably the best current account of mountaineering by and with a tough, cheerful, friendly people, with whom the British party were on excellent terms throughout, despite the initial difficulty in getting there at all. Americans could well consider sending a good climbing party to the Caucasus at a time of favorable political "climate."

HENRY S. HALL, JR.

Citizen of Two Worlds, by Mohammad Ata-Ullah, with a foreword by Lowell Thomas. New York: Harper & Brothers, 1960. 285 pages. Price $5.00.

"Under the shadow of this grim mountain, East and West had not only met, but had fused into one." So writes Dr. Ata-Ullah of The American Alpine Club's expedition to K2 in 1953. *Citizen of Two Worlds* likewise fuses into one the experiences in East and West of an adventurous intellectual with fiery energy, who went to K2 in 1953 and 1954 as liaison

officer with the American and Italian expeditions. Only 55 pages concern these expeditions, but they reflect intimately the courageous determination and warm humanity of this extraordinary man. His thoughts at the time of the accident to the American party for instance show depths of feeling rarely expressed.

Citizen of Two Worlds beautifully describes Ata-Ullah's life in India in the country and city, as civilian and officer, in peace and war. We accompany him to England, where he studies medicine, and later see the remarkable responsibilities he had in Iran in wartime when he ran a reception and rehabilitation center for hundreds of thousands of half-dead Polish refugees shipped to Pahlevi from Russia. He worked with both Russians and Americans in Iran and learned from each. We also share his experiences in Azad Kashmir after the Partition of the Subcontinent.

Ata-Ullah writes graphically and he learns from all his experiences. We see him gain technical skills from the West and deep spiritual contentment from the East. Like his father and his wife—the two strongest influences on his life—Ata-Ullah is a very religious man, one whose approach is intelligent, rational and yet deeply mystical. To him, a devout Muslim, the parts of Jerusalem, whether Christian, Jewish or Muslim, were all "of equal sanctity" and he tells of wandering through the streets of the holy city, "my soul aflame with the thought of the great happenings in this town that had so powerfully shaped the spiritual destinies of mankind." He is a man of courage and action, a man who understands Western accomplishments and Eastern attitudes, but above all a man with a soul. Although his is not primarily a mountaineering book, the author sees mountaineering as an example of man's divine destiny, his ceaseless urge to probe himself and his surroundings. Through such struggles, spiritual and physical, East and West can share our "inborn instincts" to "wander, seek and discover." Here East and West can "not only meet but fuse."

ROBERT H. BATES

Sfingi di Ghiaccio, by Alberto M. de Agostini, S.D.B. Turin: I.L.T.E., 1958. 235 pages. 104 photographs, of which 15 are color; 4 maps. Price 3,500 Italian lire.

Monte Italia, Monte Sarmiento are two ice sphinxes rising 7000 and 7900 feet out of the cold waters of the Tierra del Fuego, just 100 miles from Cape Horn. The account of their first ascent by an Italian expedition, led by de Agostini, is beautifully illustrated and written in a precise and elegant style. It is unfortunate, however, that de Agostini fills 100 pages of this book with a diary account of the attempted climb of Sarmiento from the

north. He never left Base Camp, and, therefore, this part of the book lacks the insight of first hand experience and reads very much like an operations order. The interest of this book lies chiefly in the discovery of an unknown and fascinating land—a land of fiords and mountains where the average daily rainfall is one-half inch and where tropically thick vegetation is cut through by glaciers which empty into the waters of the straits. Movement below timberline is restricted by the thickness of the vegetation and the sogginess of the turf; above timberline is the realm of rock and ice completely devoid of life. The eternal wind and snow above 3000 feet produces a thick coating of porous ice feathers which make climbing extremely hazardous and difficult. Out of 57 days spent in the area, five were without snowfall.

Base Camp was established in the forest at sea level. Camp I was situated on a rock spur above the Lovisato Glacier, south of Monte Sarmiento. From here the party spent a month trying to reach the north face. They rarely caught a glimpse of their objective through the clouds and to their great dismay, after thirty days of effort, and after reaching a point 1300 feet below the summit, a break in the clouds revealed an impossible ice cliff 1000 feet high. Here the attempt from the north was abandoned, and as time was running out, the expedition split up. One group remained to continue their assault on Sarmiento from the south, and the other group left for Monte Italia aboard the cutter "Chabunco." The vivid and interesting description of their trip among the fiords and across the Brecknock strait where they fought huge waves of the Pacific for fifteen miles, is in sharp contrast to the preceding pages. It is full of anecdotes on the life of the people of the Tierra del Fuego, among whom de Agostini has spent most of his life. De Agostini then lets Luigi Barmasse, one of the climbers, give the account of the ascent of Monte Italia. This, and the account of the ascent of Monte Sarmiento by the other group (Maffei), is a story of dedication and extreme will-power which enabled them to overcome technical difficulties of the highest order. The description of the climbs is given almost foot by foot and makes good reading. Italia was climbed from Beagle Canal with one intermediate camp; Sarmiento, with a sustained effort of 16 hours from Camp I, with a bivouac in the middle of the south face.

Sfingi di Ghiaccio is a well-illustrated book, of particular interest to anyone wanting to learn more about the unknown and fascinating mountains of the Tierra del Fuego.

MARCO T. EINAUDI

Climber's Guide to the Cascade and Olympic Mountains of Washington, Second Edition, by a committee of the Cascade Section of the American Alpine Club, chairman George R. Sainsbury, illustrations by Dee Molenaar. American Alpine Club, 1961. Price $5.00 ($4.00 to members of A.A.C.).

After the sellout of the previous editions of the "Beckey Guide" it was decided to completely revise and up-date the material. The new edition describes some 980 routes as compared to around 580 in the 1949 edition. Essentially all known climbs have been covered, including those on practice rocks. The route descriptions are the result of a committee effort and naturally there is some lack of uniform viewpoint and style. An extensive review and checking procedure has been very successful in eliminating gross inconsistencies and the guide is probably as accurate as it is possible to produce for a range so large and complex as the Cascades. The line drawings by Dee Molenaar are the outstanding feature of the new edition. The preparation of a guide of this scope is a tremendous effort and the climbers and mountain travelers of Washington will be indebted for many years to come to George Sainsbury and his committee (of which Fred Beckey was, of course, a primary member and contributor).

THOMAS W. MILLER

Pikes Peak Atlas, by Robert M. Ormes. Boulder, Colorado: Johnson Publishing Co., 1959. 28 pages with 21 sketch maps. Price: $3.50.

Few people know the Colorado Rockies as well as Bob Ormes (Author of *Guide to the Colorado Mountains,* Denver: Sage Books. Price, $3.50.) and there is no one more at home then he in the hills just west of his hometown, Colorado Springs. The intimate knowledge of years plus a world of affection have gone into the making of *Pikes Peak Atlas.*

The lively text sketches the adventurous background of the city and its environs. General Palmer, the founder, was an enthusiastic horseman and the trails he built at the turn of the century survive to this day with scarcely a lick of work done on them in the meantime. Early miners, ranchers and timbermen played an important part in opening up the remoter mountain regions. Many of the roads and pathways once used by them lead off from the old Cripple Creek stage road and from the two narrow guage railway lines, now abandoned, that linked that hoary gold camp to the outside world. Walkers of a hardier era than the present used to fan out in hordes from the summer cabin colonies of Jones and Crystal Parks, of which only ruins now remain. Today one can climb Pikes Peak and a score of lesser summits by the trails they enjoyed and ramble endlessly through the upland valleys as they did, but without sight or sound of another soul.

Numerous sketch maps and ample directions open up these wonderful regions to the interested explorer of the present day. He may find the format of the *Atlas* rather cumbersome. It is large (approximately 12 x 18 inches) and built to last. But when rolled up and stuck into a pack it is hardly more awkward to carry than the loaf of French bread one of my early Swiss guides used to tuck into his knapsack when en route to a hut. As both are items that come in very handy later on, the slight bother involved seems entirely worthwhile.

ELIZABETH S. PARTRIDGE

High Sierra Mountain Wonderland, by Wampler, Heald and McDermand. Privately published by Joseph Wampler, Box 45, Berkeley 1, Calif. 122 pages, illustrated. Price $2.00.

Seldom has such a small book contained so much. The high country traversed by the John Muir Trail forms the approximate area described. The authors are experts on their respective subjects. Six well-composed and highly interesting chapters by Weldon Heald cover Topography, Geology, History, Climate and Botany. Charles McDermand writes well about fish and fishing in one chapter. For the fisherman this one chapter justifies the book. Joseph Wampler introduces the reader to birds, animals and maps of the region, and to John Muir in a few intimate sketches, terminating the book with two informative chapters on how to enjoy the Sierra Nevada and how to visit it. A complete bibliography brings the book to a close. The great number of illustrations will stimulate the interest of the prospective visitor. The authors, each in his own way, have through their words succeeded in creating a true image of the "Range of Light."

EINAR NILSSON

A.M.C. White Mountain Guide. Sixteenth Edition. Published by the Appalachian Mountain Club, 5 Joy St., Boston, Mass., 1960. 494 pages, 17 maps. $4.50.

This sixteenth edition of a guidebook first published in 1907 has been completely revised since the last (1955) edition. A major change in arrangement puts the most visited regions, starting with the Presidential Range, at the beginning of the book. The maps are folded differently, making reference to them more convenient; the titles are printed so that they can be read without unfolding the map. An enlarged Franconia map in a frontcover pocket as well as the usual large-scale Mount Washington map cover the most frequently traveled White Mountain trails. The usual smaller maps adequately portray the rest of the region.

MIRIAM UNDERHILL

Proceedings of the Club

ANNUAL REPORT OF THE SECRETARY FOR THE YEAR 1960

Since my last report as published in the *Journal* the Council has elected 29 Active members; 8 were lost by death and 5 by resignation. There are now 522 Active and 12 Honorary members (4 of the latter are also Active members). Those lost by death are Julia (Temple) Grinnell, Lulie Nettleton, John C. Fonda, George E. Goldthwaite, George H. Harvey, Walter L. Huber, Lee L. Stopple and John H. Strong. It should be noted here that a printer's error in the last Journal showed total membership a year ago as 560. The correct number as I reported at the last meeting was 506.

The Council met four times during the past year with a total attendance of 43. Qualifications for membership have been reviewed and the Council has leaned heavily on the opinions submitted by the Sections. The consensus is that the tendency should be toward longer experience and more evidence of technical ability, however, a substantial majority does not regard absolutely inflexible tests as desirable.

There has been no change in the Club's policy on sponsorship of major expeditions. This is treated fully in a statement of policy prepared by the Expeditions Committee and is available on application to anyone interested. Individual initiative and personal sacrifice are still the main ingredients of success in this type of project; while the Club has been able to give substantial assistance under its stated policy, it would obviously be impossible for it to solve the logistic problems of all who wish to go to the Himalayas.

Again we are proud of the victory of an expedition sponsored by us in affiliation with the Pakistan Army Sports Control Committee. It is especially to be appreciated that a representative of our co-sponsor joined three of our members in reaching the summit of Masherbrum. This joint triumph over one of the most difficult and dangerous mountains is, we suspect, the kind of "summitry" which really makes progress toward international amity.

With the ascent of Dhaulagiri by a strong Swiss party the end of an era is reached. Although many good mountains in the Himalayas are unclimbed it will probably be difficult to organize and especially to finance major expeditions from the United States. However, at least let us hope that smaller and less costly parties will still be able to join in the conquest

of many of these mountains, which if placed anywhere else would be regarded as giants.

And before we close the chapter on the last of the Achttausenders in the free world let us remember those who made the early struggles against odds and whose experience, knowledge and sacrifice contributed so much to the final victories.

LAWRENCE G. COVENEY, *Secretary*

ANNUAL MEETING AND DINNER

Minutes of the 57th Annual Meeting of the American Alpine Club held at the Boston Museum of Science, Boston, Saturday, December 3, 1960.

President Bates called the meeting to order at 2:15 P.M. Sixty-one members were in attendance. The President asked if there were any corrections or additions to the minutes of the last meeting as published in the *Journal*. It was moved, seconded and voted to approve these minutes. The President introduced the Assistant Secretary, Miss Mona Monahan, who had assumed this post since the last annual meeting. The Secretary's report was then read and the Treasurer explained in detail some aspects of his printed report. These explanations dealt mostly with the simplified form in which the books are now kept, also the reasons why the Club's financial position is considered sound. It was moved, seconded and voted without dissent that the Treasurer and Secretary receive the thanks and approval of those present for their efforts on behalf of the Club during the past five years.

H. Adams Carter reviewed his plans for the coming *Journal*. Henry Hall said the revised *Guide to the Cascade and Olympic Mountains of Washington* was in the hands of the printer and should be ready by the end of January. William Child reported with some optimism on the prospects for Conservation measures and lamented the passing of George Goldthwaite who had been one of the strongest forces on this committee. Frank Cary's report showed the Library in up-to-date status.

Dr. Benjamin Ferris noted the tragic loss of John Fonda and announced that Richard Emerson would replace him on the Safety Committee. There is a possibility that the Alpine Club of Canada will join with the Safety Committee and make the Accident Report a North American report. John Humphreys reported on the move to organize a Mountain Rescue Association on a national basis.

George Bell said that Major Hackett was attempting to organize an expedition to Everest for 1961, otherwise the Expeditions Committee knew of no plans. Harry Francis reported on the results of the research expedition to the Eldridge Glacier and touched on possible future plans. There

were brief reports from the *American Alpine Club News* and the committee on House, Medical and Mountain and Cold Weather Training. Bradford Washburn gave the present status of the *Mount McKinley Guide.*

The President referred to the report of the Nominating Committee as published in the *News* of September 30, No. 60, and called on the Chairman of that committee, David A. Robertson, Jr. who reaffirmed the report as published. The Secretary inquired if there were any objections or other nominations. As none were made, the Secretary declared elected as councilors for the ensuing three years: Nicholas B. Clinch, Bradley B. Gilman and John S. Humphreys. John H. Graham announced plans to climb Mount McKinley in May 1961 and asked any who were interested to communicate with him. The President inquired if there was any further business; none being proposed he declared the meeting adjourned at 3:03 P.M.

Lectures. Dr. Ferris described with film and color pictures the leader-training expedition to the Northern Selkirks. The film had been taken under difficulties and was uneven at times, however many of us were glad it had not been cut for this area evokes memories for most of us whose camping and expedition experience is limited to North America. Philip M. Smith presented an official Navy film of the penetration of The Bellinghausen Sea. The Antarctic scenes were an excellent contrast to some exceedingly beautiful pictures shown by H. Adams Carter, these pictures were the more remarkable for being incidental to Alaskan glaciological studies.

The Dinner. The Skyline Room and the Morse Auditorium of the Museum of Science were perfect for the social hour and dinner. Due to the intensity of conversation there was more than usual difficulty in getting the 180 members and guests to dinner on time. An excellent dinner preceded a memorable description of The First Ascent of Masherbrum. The description was in three parts and we have heard some differences of opinion as to whether Nick Clinch was most effective in his introduction or George Bell or Willi Unsoeld in the story of the climb. The composite effect, with the enlivening differences in style between the three speakers, was outstanding. Of course they had some good material in the greatest success so far achieved by American mountaineers and one must agree with the remark that the speakers should have been tape recorded. We do not think this oversight should be held against the brilliant job done by the Dinner Committee. They could not have known the talks would be that good. Those of us who were present must just count ourselves that much more fortunate.

LAWRENCE G. COVENEY, *Secretary*

REPORT OF THE CONSERVATION COMMITTEE

The Conservation Committee has not taken formal action on any specific conservation problem during the past year. Prior to this report all our members—who are geographically spread throughout the country in areas where conservation problems affecting the Club are significant—were asked by the Chairman to inform him of any conservation matters of consequence to the Club that should be mentioned in this report. The following are the gleanings from Committee.

During 1959, through our President and following the recommendation of the Conservation Committee and formal motion of the Council, the Club expressed its support of the Wilderness Bill (National Wilderness Preservation System Act). Likewise, the Club sent a letter to the Secretary of the Interior urging that a study be initiated to determine the advisability of making a national park out of the Glacier Peak—Lake Chelan area in the state of Washington. In the last session of Congress both bills were left as unfinished business in the Committees on Interior and Insular Affairs, both Senate and House.

The enactment in June, 1960 of the Multiple Use Act, perhaps the most important piece of conservation legislation in the last session of Congress, made it advisable to revise parts of the Wilderness Bill to accommodate more fully to the new legislation. This review gave opportunity, also, to bring together and clarify amendments and suggestions which at the time were under consideration in the Committee on Interior and Insular Affairs of the Senate. The result has been S. 3809, a so-called "clean" bill. While no action was possible on the revised bill in the last Congress, it is expected and strongly hoped that the bill will be introduced early into Committee business in the new session. Expectations that the bill will be enacted this coming year are not merely hopeful but optimistic.

Because the Club has already expressed its support of the original bill, and recent revisions have merely bettered the original intent, no Club action seems necessary at present. Whether they have done so previously or not, Club members individually should seriously consider expressing their feelings regarding the bill by letter to the Chairman of the Committees on Interior and Insular Affairs of the Senate and House. Such letters carry much weight in Washington as those of us on the scene well know. The Wilderness Bill is regarded throughout the country as the conservation bill of the century and offers our greatest chance to insure protection of our national wilderness areas—yet without compromise to existing national parks, national forests, and other established forms of protection. This chance may never come again.

Recently, the U. S. Forest Service has designated a Glacier Peak Wilderness Area. As an organization we can take satisfaction in the thought that our efforts, although directed toward a national park, helped to stimulate a move toward giving added protection to one of the most scenic and alpine areas in the United States.

Your Committee is now considering whether the Club should take part in the current effort to develop the Great Basin National Park in Nevada. It will be some time before all members have sufficient information to make any recommendation to Council.

From his on-the-scene position in Washington your Chairman feels that interest in conservation is running high—mainly because everyone in America is becoming aware of our dwindling resources in the face of a pressing need for self-dependence against outside threat. Unfortunately, under guise of national need, come misguided and irresponsible attempts to release important areas from what protection they have. As an outdoor organization we have a grave responsibility to contribute, within our conservation policy, to all efforts to restrain misdirected inroads upon our national heritage of wilderness.

WILLIAM S. CHILD, *Chairman*

REPORT OF THE LIBRARY COMMITTEE

Fifty-one new volumes were added to the Library during the past year. Thirty of these were books and twenty-one were journals. The total number of volumes in all sections of the Library is approximately 6200. Your Committee held three meetings.

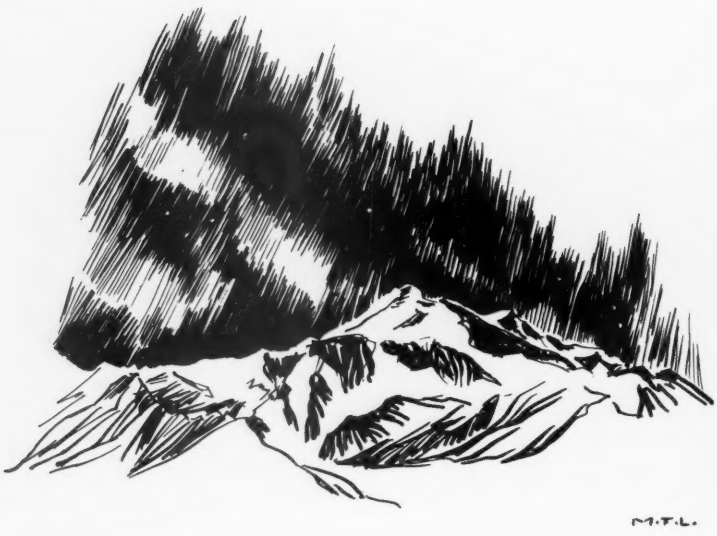
The use of this great treasure of mountaineering literature is not very great. A proposal to invite college mountaineering club members to use the facilities when in New York is under consideration. The use of the Library is not limited to members. Other mountaineering club members are encouraged to use the reference sections. To make the facilities available during the evening hours, the Committee has arranged to have someone in attendance from 6:00 to 9:00 P.M. the third Wednesday each month. This is a temporary schedule to determine the interest in using the Library during the evening hours. If sufficient use is made, a more permanent schedule will be set up.

Projects under consideration are: (a) The acquisition of the best mountaineering literature. (b) Review of the guide book section to provide information for many mountain areas. (c) Review of photographs, slides and film in storage to determine their value to the Club. (d) Studying the possibility of establishing branch libraries. (e) Review various sections of

the Reference Library to see that each is complete with the best mountaineering books.

Card cataloging for books is now performed by the Assistant Secretary. This is a great saving to the Club. The Committee has determined the information to be recorded on the cards and also the various kinds of cards to be maintained in the catalog file. Cost of new books and binding of journals was $119.54. Income from sale of books was $7.68. The organization of the Library Committee now includes a Selection Committee which selects all books that go into the Library. Also six Advisors to the Selection Committee send recommendations regarding new books, journals and other mountaineering literature.

FRANCIS L. CARY, *Chairman*



CLUB PUBLICATIONS

THE AMERICAN ALPINE JOURNAL, annually from 1929, illustrated. Price and availability upon request. Current issue, $3 ($2 to members).

A CLIMBER'S GUIDE TO THE ROCKY MOUNTAINS OF CANADA, by Howard Palmer and J. Monroe Thorington, revised edition by Thorington, 1953. This guide covers all peaks of interest to climbers with routes and map references. $4 ($3 to members).

A CLIMBER'S GUIDE TO THE INTERIOR RANGES OF BRITISH COLUMBIA, by J. Monroe Thorington. Covers the Selkirk, Purcell (including Bugaboos), Monashee, and Cariboo ranges. Third Edition, 1955, $3 ($2.50 to members).

A CLIMBER'S GUIDE TO THE CASCADE AND OLYMPIC MOUNTAINS OF WASHINGTON. New edition in preparation.

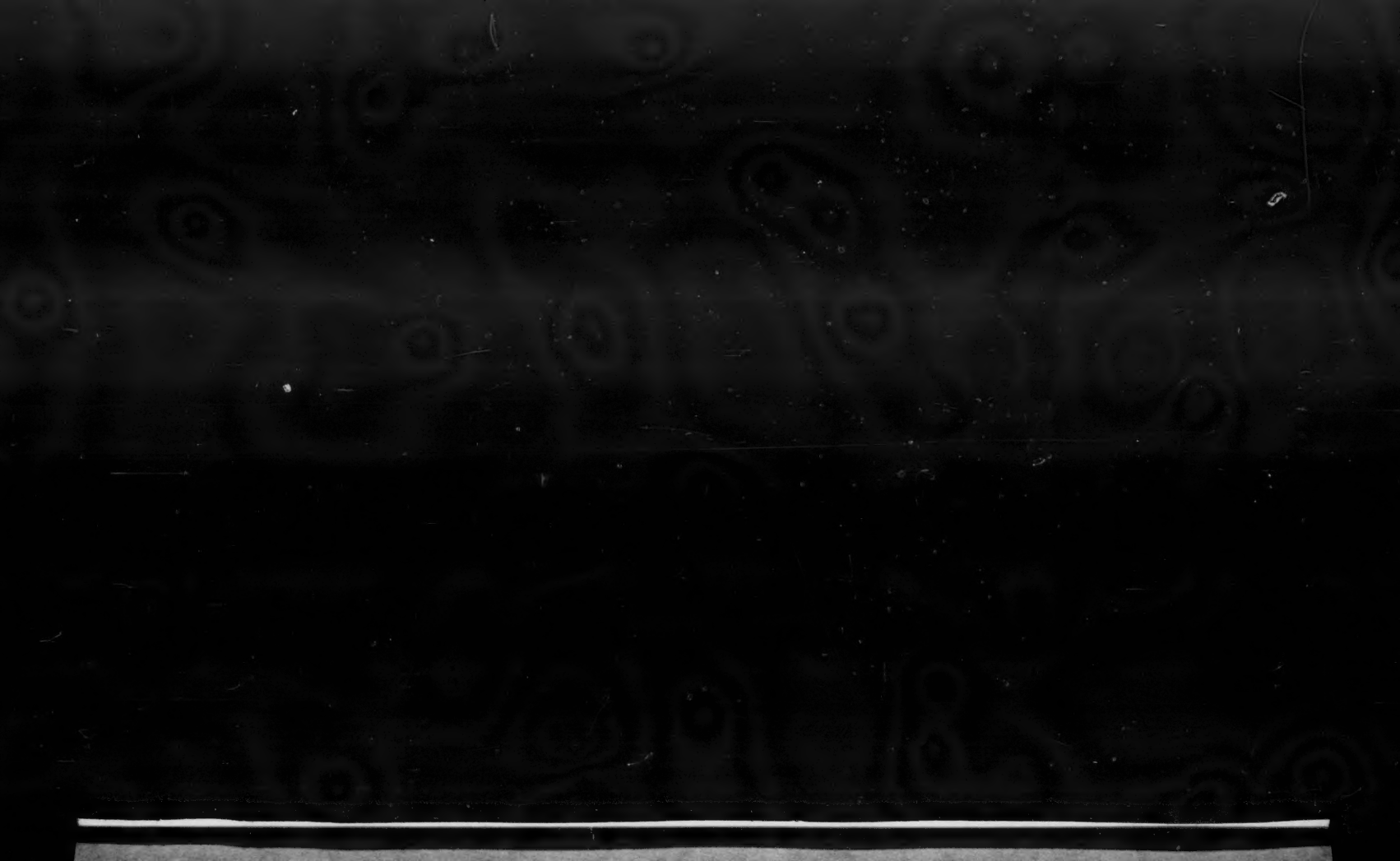
A SURVEY OF EARLY AMERICAN ASCENTS IN THE ALPS IN THE NINETEENTH CENTURY, by J. Monroe Thorington. Illustrated. $2 ($1.50 to members).

WHERE THE CLOUDS CAN GO: THE AUTOBIOGRAPHY OF CONRAD KAIN, edited by J. Monroe Thorington. A reprint (1954) of the book originally published by the club in 1935. $5.

ACCIDENTS IN NORTH AMERICAN MOUNTAINEERING. Annual report of the Safety Committee of the American Alpine Club. 35 cents.

HANDBOOK OF AMERICAN MOUNTAINEERING, by Kenneth A. Henderson. 1942. $3.75 ($2.50 to members).

A CLIMBER'S GUIDE TO THE CASCADE AND OLYMPIC MOUNTAINS OF WASHINGTON, by a committee of the Cascade section of the American Alpine Club, chairman George R. Sainsbury, illustrations by Dee Molenaar. Second edition, 1961, $5 ($4 to members).

The American Alpine Club, 113 East 90th Street, New York 28, N. Y.

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